CURRENT PRICES OF ENGINEERING MATERIALS

Supplement to ENGINEERING NEWS, appearing in the First Issue of Every Month. New York, December 7, 1911.

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PRICES CHANGES AND THE BUSINESS OUTLOOK.

The iron and steel trade is much more active than in months. Early in November the railways purchased cars in large quantities, and it is estimated that orders were booked for 45,000 cars in November. These orders were the direct result of extremely low prices named by manufacturers, standard freight cars being sold at $750 compared with $1,000 two years ago. The buying of passenger equipment was light, and there is a great deal of desirable second hand equipment on the market. The buying of cars stimulated an inquiry for pig iron, but consumers hesitated to close contracts until after Dec. 1, when a heavy buying movement in the pig iron trade set in. Business transacted then was at lower quotations, and Southern foundry No. 2 sold as low as $9.25 Birmingham. At these low prices consumers purchased freely, and the manufacturers of cast iron pipe who had previously purchased freely at somewhat higher quotations, were large buyers.

In the line of finished iron and steel, buying was less than normal, the rail sales for the month amounting to no more than 200,000 tons. The Harriman Lines and the Pennsylvania Lines have not been conspicuous buyers of either rails or equipment during the month. Somewhat higher prices have been named for cast scrap, and the Republic Iron & Steel Co., which was the leader of the downward movement in bars and the company which really started the price cutting, signified its intention of demanding $1.15 base for bars f. o. b. Pittsburg after Jan. 1. Other manufacturers of bars quickly followed.

In plates there has been a good demand, especially from car builders, and quite a little shipbuilding work is under contract.

All metals are higher than a month ago, copper having advanced nearly 1 ct. a lb., there being a good demand from foreign consumers and domestic buyers also purchased freely. Spelter has sold at higher figures than before in several years, and is with a fraction of the highest price on record. Pig tin is likewise sold within a few cents of the high price named early this year. The leading producer of lead advanced its quotation twice during the month, and the demand is distinctly better.

The cement industry is in practically the same condition as a month ago, the limited demand being filled by manufacturers at about the cost of production.

A reduction in the price of linseed oil, due to a large crop of flaxseed, brought with it a reduction of half a cent per lb., the price of white lead. Cross ties have advanced moderately, but the demand is limited.

The excellent export trade which has been developed by manufacturers in this country in the year of business depression has resulted in higher ocean freight rates. The cotton crop, which is about 3,000,000 bales larger than a year ago, calls for a great deal of cargo room and the iron and steel exports have been unusually large. As a result, freight rates on iron and steel from New York to Rotterdam which were 7s/6d a ton last year are 10s now, and many of the companies are unable to furnish cargo room for December. For February shipments a premium is demanded, and in some special ports such as Manchester no room is available except for February shipment. This condition prevails not only in New York, but in Boston and in Montreal.

Numerous large projects for extensive improvements are contemplated, but for the moment are being withheld owing to unsatisfactory labor or financial conditions. The rapid scaling down in the price of commodities is attracting much attention from large industry concerns who contemplate extensions in the future.

Labor conditions are much unsettled, and more men are out of employment than for a long time. A strike among the garbage handlers under the Civil Service of New York City caused much inconvenience, but their places to labor rapidly filled by men anxious to labor at this class of work, although they were not steady laborers and only worked a few days. The confession of the McNamara brothers in Los Angeles is one of the hardest blows that union labor has had to stand, particularly as their guilt was so vehemently denied by a labor leader of country-wide fame.

Railway earnings show an improvement, and equipment of railways is being used to a larger extent than before this year. The financial position continues to gain strength, especially the matter of the huge transfer of credits abroad.

LABOR.

While there is only a small demand for rough laborers to go out of the city, Italians are unwilling to go out in gangs even when wages are as high as $2.35. This is principally due to a desire to work on the new subways, where work will be steady all the year round, and there is a revolt against the unsatisfactory accommodations in many construction camps. Rough laborers are demanding better attention as far as the commissary departments are concerned.

In New York only a small number of the men needed for the actual construction of the subways have been hired as yet, but the work is being taken up more rapidly day by day and sufficient men are available at $1.75. The demand for skilled laborers is negligible

Strikes have been infrequent, although the walk-out of the garbage handlers in New York caused much inconvenience and a strike-breaking agency, which furnishes men for this work, is still advertising for laborers at $3 per day and maintenance. All violence on this work ceased a week or more ago.

The greatest blow to organized labor in this country was the confession of the McNamaras in Los Angeles. It has been an open secret for years that many of the local labor unions were dominated by a few men who would rather be idle than work.

The best element of organized labor, particularly those unions made up of skilled and intelligent men, would not countenance such acts of violence. Whether some of the leaders of labor were cognizant of these acts only time will tell, but unions has suffered a severe blow.

Fortunately, for the cause of union labor, the defense fund raised for counsel of the McNamaras was much smaller than newspaper accounts give it, and the strongest labor union in the country contributed probably less than $10,000 to this fund.

CEMENT, LIME AND BRICK.

Portland Cement.—No improvement is noted in the situation, even the largest cement manufacturers in the Lehigh Valley district are willing to sell at 65 cts. per bbl. in bulk at the mill, and other manufacturers have made quotations equivalent to 57 to 60 cts. per bbl. in bulk at the mill. In New York prices are from $1.25 to $1.33, with the usual allowance of 40 cts. for bags returned. Only favored customers can secure the lower quotation, but it has been made again this month. Long-time contracts are not booked at these figures, although a few of the smaller concerns are willing to take business until the opening of navigation next Spring. Much of the work which was being rushed for completion before the setting in of cold weather has been finished, and it is improbable that new business will develop this Fall. Stocks at the mills have been largely reduced, and none of the manufacturers are anxious to stock up. In consequence, somewhat higher prices may be named in the Spring, but there is a vast producing capacity awaiting anxiously to turn out cement at almost any figure.

Brick.—Due to the lateness of the season and the drawing on stack piles, the price of brick has advanced moderately, and brick is now selling at $7 per thousand on dock New York.

Natural Cement.—Business continues dull. In New York 80 cts. per bbl. is named and in Boston $1.05.

Plaster Blocks.—For large lots, prices are as follows:

	Weight, per sq. ft. lbs.	Price, per sq. ft. cts.
2-in..............	7	6
3-in..............	8½	6½
4-in..............	11	7¼

These blocks are made 32-in. long by 13½-in. wide, containing 3 sq. ft. of surface. The 2-in. blocks are solid, but the others are hollow.

Plaster boards, ⅝-in. thick, are 16 cts. per sq. yd.

Lime.—The following prices are for lots of 500 bbls. delivered in New York City: State common, per bbl., 75 cts.; Rockland-Rockport, common, 92 cts.; Rockland-Rockport, special, 300 lbs., $1.37; finished, 300 lbs., $1.47; finishing, 200 lbs., $1.02, and 350 lbs., $1.62; New Milford, $1.30.

STONE.

Blue Stone.—The stone industry is just about to close down for the season. On account of the poor navigation the quarries must shut down, thus prohibiting all filling of orders. Prices remain the same as last month.

For delivery, either alongside of dock or f. o. b. cars, New York, prices are as follows: Flagging, 6 cts. per sq. ft. per in. of thickness; flagging, 2½ to 3-in. thick, that will pass New York City specifications, 18 to 19 cts. per sq. ft. Sewer bottoms, 5 ft. sq. and 3-in. thick, are sold at 25 cts. per sq. ft. Curbing, 5 × 16-in., is 45 cts., and 5 × 25-in., by 5-in. thick, is 60 cts., and 6-in. thick is 65 to 70 cts. per lin. ft., 5 × 20-in. by 5-in. thick is 55 cts.

Promiscuous shapes of building and foundation stone sell at 70 to 75 cts. per cu. ft.

Granite.—Prices continue unchanged. Run of quarry can be had at 40 to 45 cts. per cu. ft. Pink Milford granite is without change at $1 per cu. ft. for promiscuous shapes.

Limestone. — Prices are without change at 85 cts. per cu. ft. delivered alongside of dock, New York. Dressed stone is quoted at $1.25 to $1.50 per cu. ft.

Sandstone in the rough is 80 cts. to $1 per cu. ft.

Interior Stone.—Slate flooring, 1-in. thick, can be had at 20 cts. per sq. ft. for the common or ribbon variety. Clear black sells at 35 to 40 cts., and the same price is asked for Vermont. A combination of slate and marble flooring is 30 cts. per sq. ft.

Marble floor, finished ready to lay, of Vermont marble, is 50 to 70 cts. per sq. ft.; Italian marble, 70 to 90 cts. Tennessee marble can be had at 65 cts. Ordinary stair work, such as slate steps, are quoted at 24 cts. per sq. ft.

CRUSHED STONE, SAND AND GRAVEL.

Crushed Stone.—Business had dropped to insignificant figures, and the quarries will shortly suspend operations for the season. This will stop new business as far as this year is concerned. Quotations are unchanged from last months as follows:

For 1½-in. stone, 85 to 95 cts. a cu. yd. is quoted; ¾-in. stone, 90 cts. to $1.00, and screenings are also sold at the same price. These prices are for full cargo lots of 500 cu. yds. delivered alongside of dock, New York City.

In Boston the demand is a little better than last month and the following prices per net ton are quoted, f. o. b. cars at point of shipment: 2½-in., 65 cts.; 1½-in., 75 cts.; ⅜-in., 90 cts.

Sand.—The volume of business being booked is small, and sellers of sand are devoting their attention to filling old contracts. On account of unfavorable weather conditions, 30 cts. is now demanded for full cargo lots. These are for lots of 500 cu. yds. delivered alongside of dock. For sand delievered in small quantities or in shallow water, extras are demanded, bringing the price up to 35 to 40 cts. per cu. yd.

Delivered in Newark, N. J., and along the Passaic River, prices are 40 to 45 cts. per cu. yd.

Gravel.—There is a fair demand, and prospects for an excellent season next year with very little surplus remaining on hand. Quotations remain unchanged at 75 to 85 cts. per cu. yd. delivered alongside of dock New York. This is for full cargo lots of 500 cu. yds.

White Quartz roofing gravel is $1.25 to $1.35 per cu. yd.

IRON AND STEEL.

Pig Iron.—Consumers are buying pig iron more freely, and the day-to-day demand is absorbing practically all the iron made, so that the furnaces are not disposed to quote on iron for first quarter shipment. While there has been some reduction in prices as a whole, quotations are fairly firm. The buying of equipment by the railways stimulated the steel trade in general, and had a beneficial influence on the pig iron market. The greatest amount of buying, however, has been the pipe founders, and some extremely large inquiries are in the market for cast-iron pipe. The production of pig iron during October was 2,202,000, which is the largest of any month this year except March, and with that exception the largest since August, 1910. The stocks of pig iron all over the country continue to decline, and there was a reduction of 10,000 tons in the stocks held by the independent steel works, and the merchant pig-iron makers in both the West and the South. Consumers are more disposed to cover their requirements for delivery during the first half of the year, but are finding furnace interests less disposed to make long-time quotations than for several months.

The pending suit against the U. S. Steel Corporation has not as yet had any detrimental effect on the market for iron and steel. In some ways, it is believed, the filing of such a suit was the worse thing that could happen; hence, there is nothing overhanging the market.

A heavy buying movement developed early in December with prices from 50 cts. to $1 a ton below the quotation of the last month

For lots of 100 gross tons and over f. o. b. points named quotations are as follows: Cincinnati Southern foundry No. 1, $14 to $14.25; Southern foundry No. 2, $13.25 to $13.75; Southern foundry No. 4, $12.50 to $13. In Philadelphia, East Pennsylvania No. 2 X foundry is $14.90 to $15.25; Eastern Pennsylvania No. 2, plain foundry, $14.65 to $15. In Chicago, Northern foundry No. 2 is $14 to $14.50, and Southern foundry No. 2 is $14.35. In Pittsburgh, Bessemer iron is again 50 cts. a ton lower at $14.90, while Basic is slightly easier at $13.35. These quotations include the 90-ct. freight rate from the Valley to Pittsburgh. In New York No. 2 X Northern foundry is $14.75 to $15, and Southern foundry No. 2 is $14.50 to $14.75. In Birmingham, Southern foundry No. 2 is held at $10, and business has increased materially.

Steel Rails.—More business has developed in the rail market during the last month than in any similar period this year. The Louisiana & Nashville has purchased 50,000 tons; the Burlington 60,000 tons, of which 40,000 tons are open-hearth rails from a Colorado mill; the Norfolk & Western, 25,000 tons; the Great Northern 40,000 tons; the Atlantic Coast Line 19,000 tons, and the Reading and the Central Railroad of New Jersey jointly 20,000 tons. The largest companies have not yet placed their orders, but should they do so with the same liberality that they placed orders for cars, the rail business for 1912 will be large. It is expected that the Pennsylvania will purchase somewhat over 200,000 tons. The price is $28 for standard sections; $30 for open hearth, although there have been some rumors to the effect that less than $28 had been done for Bessemer rails. Girder rails for street car use are held at $38.40 per gross ton for 30-ft. lengths, and $40.40 for 60-ft. lengths.

Quotations are as follows for lots of 500 tons and over: Standard sections, 50 to 100 lbs. per yd., 1.25 cts. per lb.; 40 to 45 lbs., 1.16 cts.; 30 to 35 lbs., 1.20 cts; 16, 20 to 25 lbs., 1.21 cts., and 12-lb. rails, 1.25 cts. Relaying rails are unchanged in New York, at $20 to $21 per gross ton. In Chicago, standard sections, subject to inspection, are steady and also unchanged at $24.

Track Supplies.—The buying of track supplies has been limited, although a western road has placed an order for 6,000 kegs of spikes, and two eastern roads have ordered from 2,000 to 2,500 kegs. Quotations are unchanged at $1.40 to $1.45 per 100 lbs. f. o. b. Pittsburgh. In Chicago spikes are easier at $1.50 to $1.55, and track supplies are held at $2 to $2.10. The extra are without change and are repeated from last month as follows:

Railroad Spikes.		Cents.
3, 3½, 4, 4½ and 5 × ½	Extra	.10
3½, 4 and 4 × 7/16	Extra	.20
3, 3½, 4 and 4½ × ⅜	Extra	.30
2½ × ⅜	Extra	.40
2½, 3 and 3½ × 5/16	Extra	.60
2 × 5/16	Extra	.80

Boat Spikes.		
¾ in. square, 8 to 16 in. long	Extra	.15
⅝ in. square, 2 to 16 in. long	Extra	.15
½ in. square, 6 to 16 in. long	Extra	.15
7/16 in. sq., 6 to 12 in. long	Extra	.20
⅜ in. square, 2 to 16 in. long	Extra	.15
5/16 in. sq., 4 to 8 in. long	Extra	.45
¼ in. square, 4 to 8 in. long	Extra	.75
¼ in. sq., 3 to 3½ in. long	Extra	1.00

Structural Steel.—The awarding of the contract for the large arch of the Hell Gate Bridge was a signal for a revival in several branches of the steel trade. This order, which was for 32,000 tons, went to the American Bridge Co. The total requirements for this structure will be about 90,000 tons. While building is not considered especially active, there are several large structures contemplated, notably the Missouri State Capitol at Jefferson City, Mo.; some important railway structures in Chicago, as well as much steel work for grade-crossing elimination in the state of Ohio. Extremely low figures have been named for all kinds of fabricated work, and this is the reason why some of the railroad contracts have come out. It is noticeably true in the demand for cars. Quotations are again easier and 1.15 cts. can be done on standard shapes in Pittsburgh. Other quotations are as follows:

I-beams, 3 to 15-in. channels, and angles, 3 to 6-in., 1.10 to 1.15 cts.; I-beams over 15-in. and angles over 6 in., 1.15 to 1.20 cts; H-beams over 18-in., 1.25 to 1.30 cts.; tees, 3-in. and larger, 1.10 to 1.15 cts.; deck beams and bulb angles, 1.40 to 1.45 cts.; hand-rail tees, 1.95 to 2.10 cts.; checkered and corrugated plates, 1.95 to 2.10 cts.

Mill shipments from Chicago are quoted at 1.33 cts. base; shipped and out of store, 1.60 cts.

Cast-Iron Pipe.—The inquiry for cast-iron pipe is larger than at any in years. The Consolidated Gas Co. is in the market for about 16,000 tons, mostly large-sized pipe; the Brooklyn Gas Co. is in the market for 4,000 tons, and the United Gas Improvement Co., of Philadelphia, is inquiring for 4,000 tons. There are several inquiries for small lots from 100 to 500 tons for various water developments in the Southwest.

Quotations are as follows:

Birmingham, Ala., 4 to 6-in., $23; 8 to 12-in., $22; over 12-in., $21.

Chicago, 4-in., $26.50; 6 to 12-in., $24.50; 16-in., $24.

San Francisco, 4-in., $35; 6 to 12-in., $34.

New York, 6-in. pipe is much firmer, due to the large inquiry and is now held at $22 to $23.

Gas pipe is held $1.00 a ton higher in all markets. These prices are per net ton or 2,000 tons.

Plates.—Although prices are lower, the plate market has been materially strengthened by the large orders for cars placed during the month, and specifications are coming in freely on old contracts. New contracts are likewise being made with considerable freedom and more than the normal tonnage is being booked. The contract for 9,400 tons of plate for the Los Angeles Aqueduct has been awarded to the Carnegie Steel Co. The Newport News Shipbuilding & Dry Dock Co. has contracted for a coastwise vessel, and a small contract has been awarded for a ferryboat to be built in Newburgh, N. Y.

Prices are again lower, and 1.10 to 1.15 cts. is quoted for wide plates. All these prices are per lb. f. o. b. In Chicago, store prices are 1.60 cts., Pittsburg. The extras are as follows:

	Cts. per lb.
Gages under ¼-in. to and including 3/16-in. on thinnest edge	.10
Gages under 3/16-in. to and including No. 8	.15
Gages under No. 8 to and including No. 9	.25
Gages under No. 9 to and including No. 10	.30
Gages under No. 10 to and including No. 12	.40

Old Materials.—While prices show no improvement compared with a week ago, the market is decidedly better and dealers in scrap have some hopes that there will be a material improvement in the near future. Dealers are not disposed to sell their scrap unless it is absolutely necessary, but numerous small dealers are being pressed for cash, and, in consequence, the market is weak. The larger holders are waiting until prices show a material betterment.

Quotations in New York, per gross ton, are as follows:

Heavy melting steel scrap	$9.25 to $9.75
No. 1 yard wrought, long	10.25 to 10.75
No. 1 yard wrought, short	9.25 to 9.75
No. 1 railroad wrought	11.50 to 12.00
Pipes and flues	8.75 to 9.25
Cast borings	5.75 to 6.25
Machinery cast, broken up	10.50 to 11.00
Stove plate	8.25 to 8.75
Malleable castings	10.00 to 10.50

In Chicago, while there is no change in the quoted price, consumers feel more confident of an early betterment in the market. Quotations are as follows:

	Per gross ton.
Heavy-melting steel scrap	$9.50 to $10.00
	Per net ton.
Miscellaneous railroad wrought No. 1	$10.00 to $10.25
Miscellaneous railroad wrought No. 2	9.00 to 9.25
Machine-shop turnings	5.75 to 6.25
No. 1 cast scrap	10.00 to 10.50
Pipes and flues	7.00 to 7.50
Railroad malleable	9.50 to 10.00
Agricultural malleable	8.50 9.00

Quotations are as follows f. o. b. Pittsburgh:

	Per gross ton.
Re-rolling rails	$12.50 to $12.75
No. 1 foundry cast	12.25 to 12.50
No. 2 foundry cast	11.25 to 11.50
Old grate bars	9.00 to 9.25
Car wheels	12.00 to 12.25

Rivets.—The demand shows an improvement, but prices are again easier, and structural rivets can be had at 1.45 to 1.50 cts. compared with a bottom price of 1.50 cts. quoted last month. Boiler rivets are likewise $1 a ton cheaper, and are quoted 1.50 to 1.60 cts. f. o. b. Pittsburgh. It is possible that these prices might be still further shaded on a very desirable order.

Sheets.—Contracts entered into for sheets have been considerably larger this month, and also more numerous. Large consumers have endeavored to cover their requirements for 1912 at prevailing prices, but no sheet interest has been sufficiently anxious for business to close such a large tonnage at these low quotations. Sheet mills are not operating to the maximum capacity, but business on the books shows that as soon as the consuming season commences specifications will begin to come in rapidly. Quotations are without change, the base price being 1.85 cts. Pittsburgh for No. 28, one pass, cold rolled, soft steel sheets and 2.85 cts. for No. 28 galvanized.

Prices f. o. b. Pittsburgh, are as follows:

	Cts. per lb.	
	Black.	Galvanized.
Nos. 10 and 11	1.50	1.85
Nos. 12, 13 and 14	1.55	1.95
Nos. 15, 16 and 17	1.70	2.10
Nos. 18, 19, 20 and 21	1.70	2.25
No. 22	1.70	2.25
Nos. 23 and 24	1.75	2.35
Nos. 25 and 26	1.80	2.55
No. 27	1.85	2.70
No. 28	1.85	2.85
No. 29	1.90	2.95
No. 30	1.90	3.15

In Chicago store prices are as follows:

	Cts. per lb.	
	Black.	Galvanized.
No. 10	2.05	2.60
No. 12	2.05	
No. 14	2.10	
No. 16	2.20	2.70
Nos. 18 to 22	2.35	2.85
No. 24	2.40	2.95
No. 26	2.50	3.15
No. 27	2.60	3.20
No. 28	2.80	3.45
No. 30	3.00	3.90

Corrugated Roofing.—The demand for corrugated roofing is not active at this season of the year, but some fairly large contracts have been made for next year's delivery. The following quotations, which are per 100 sq. ft. of roofing surface in carload lots f. o. b. Pittsburgh, will probably be shaded to the extent of $1 to $2 a ton, especially for the painted. No. 28, painted, $1.30; galvanized, $2.45; No. 27 painted, $1.45; galvanized, $2.50; No. 26 painted, $1.55; galvanized, $2.60; No. 24 painted, $2.05; galvanized, $3.10; No. 22, painted, $2.55; galvanized, $3.65.

Corrugated sheets from store New York are held as follows per 100 sq. ft. of roofing surface; No. 28, painted, $2.40; galvanized, $3.55; No. 26, painted, $2.75; galvanized, $3.80; No. 24, painted, $3.65; galvanized, $4.50.

Merchant Pipe.—The largest order taken during the month was from the Gulf Refining Co. for 100 miles of 6-in. pipe. Small size of pipe is only in fair demand, but quotations are firmly adhered to, while for line pipe there has been quite a little cutting. Discounts are as follows:

	Black.	Galvanized.
¾ to 1½ in. Butt Welded	80	72
2 in. Lap Welded	77	70
2½ to 4 in. Lap Welded	78	70
4½ to 6 in. Lap Welded	78	70
7 to 12 in. Lap Welded	76	66

At these discounts the net prices of pipe per ft. are as follows:

	Steel pipe in cts. per ft. f. o. b. mill.	
	Black.	Galvanized.
¾-inch	2.30	3.22
1 -inch	3.30	4.62
1¼-inch	4.50	6.30
1½-inch	5.40	7.56
2 -inch	8.28	10.80
2½-inch	12.075	16.10
3 -inch	15.855	21.14
4 -inch	22.68	30.24
5 -inch	31.90	43.50
6 -inch	41.36	56.40
7 -inch	56.40	79.90
8 -inch	60.00	85.00
9 -inch	81.60	115.60
10 -inch	84.00	119.00
11 -inch	108.00	153.00
12 -inch	117.60	166.60

Wire Rope.—The demand is small but discounts remain unchanged, principally because no orders sufficiently large have appeared to test the market. The discount to the larger trade is 42½ and 5% from list for galvanized and 50 and 5% from list for bright.

The net prices of bright wire rope are as follows:

Diameter, Ins.	Price per ft. Cast steel.	Crucible steel.	Plow steel.
2½	$1.05	$1.24	$1.46
2¼	.85	1.05	1.22
2	.57	.65	.76
1¾	.55	.54	.64
1½	.32	.39	.45
1¼	.23	.28	.32
1	.15	.18	.21
¾	.10	.11	.13
⅝	.07	.09	.10
½	.06	.07	.07

Steel Castings.—The volume of business shows an improvement, but prices are without change. Open hearth steel castings are 3½ to 5 cts. per lb. when the castings weigh from 100 to 500 lbs. Crucible castings, weighing within the same limits, are 7½ to 9 cts. per lb.

Freight Rates.—The freight rates on finished steel products, from the Pittsburgh district, including plates, structural shapes, merchant steel and iron bars, pipe, fittings, plain and galvanized wire, nails, rivets, spikes and bolts (in kegs), black sheets (except planished), chain, etc., are as follows, in cts. per lb.; Albany, 16; Buffalo, 11; Boston, 18; Baltimore, 14½; Canadaigua, 13½; Cleveland, 10; Columbus, 12; Cincinnati 15; Chicago, 18; Denver, Colo., 85½; Harrisburg, 14½; Louisville, 18; New York, 16; Norfolk, 20; Philadelphia, 15; Rochester, 11½; Richmond, 20; Scranton, 15; St. Louis, 23; Washington, 14½.

Castings Gray Iron.—Building castings can be had at 1.62½ to 2 cts. per lb., depending on the size of the order and shape of the casting. Stair work is 2 to 2.50 cts. per lb. Rough castings, such as foundation pieces, sewer work, and similar heavy pieces, are 1.50 to 1.75 cts. per lb.

Merchant Shapes.—The decline in New York does not reflect the full cut in mill prices. Quotations from store New York are as follows:

	Cts. per lb.
Refined iron:	
1 to 1⅞-in. round and square	1.60
1½ to 4-in × ⅜ to 1-in	
1½ to 4-in. × ¼ to 5-in	1.70
Rods:	
⅝ and 11/16-in. round & square	1.70
Angles:	
3-in. × ¼-in. and larger	1.80
3-in. × 3/16-in. and ⅛-in	2.20
1½ to 2½-in. × ⅛-in	1.95
1½ to 2¾-in. × 3/16-in. and thicker	1.85
1 to 1¼ × 3/16-in	1.95
1 to 1¼ × ⅛-in	2.00
⅞ × ⅛-in	2.10
¾ × ⅛-in	2.15
⅝ × ⅛-in	3.35
Tees:	
1-in	2.25
1¼-in.	2.10
1½ to 2½ × ¼	1.90
1½ to 2½ × 3/16-in	2.00
3-in. and larger	1.85
Beams	1.80
Channels, 3-in. and larger	1.80
Bands, 1½ to 6 × 3/16 to No. 8	2.00
"Burden's Best" Iron, base price	3.15
Burden's "H. B. & S." iron, base price	2.95
Norway bars	3.60
Bessemer machinery	1.70
Cast steel base	7.00
Special cast steel, base	14.00

Piling Sheet Steel.—Some sheet steel piling for export has been sold. Prices are now 1.40 cts. per lb. f. o. b. Pittsburgh.

Tin Plate.—The tin-plate makers have placed some exceedingly large contracts for plates at a low figure. The prevailing quotation of $3.45 Pittsburgh and $3.64 New York, rules for everything except the largest contracts, but some of these have evidently been placed at $3.40. The mills are not operating to more than 50% of capacity, but contracts have been made which will keep them in operation to at least 65% of capacity most of next year.

Terne plates or tin plates used for roofing purposes are sold by the box of 112 sheets. Store prices in New York are as follows: for 20 × 28-in. I C. plates with an 8-lb. coating, $8.30 per box; plates of same size with a 15-lb. coating, $10.20; 20-lb. coating, $12.80, and 40-lb. coating, $16.30.

Coke.—Even lower prices have been made this month than last, and a sale of about 5,000 tons of standard coke for prompt shipment was made at $1.55 per ton at oven. For contracts extending over next year $1.50 to $1.60 is demanded and paid. For 72-hour foundry coke, the price is unchanged at $1.85 to $2 for prompt shipment and $2.10 to $2.40 for business throughout 1912.

Chain.—Prices are unchanged and the following are named for stock lots of 500 lbs. to consumers. The quotations are per 100 lbs. f. o. b. Pittsburgh:

Sizes in ins.	Proof.	[illegible]	BBB
3/16	$8.10	[illegible]	$9.85
¼	5.55	[illegible]	7.30
5/16	4.55	[illegible]	6.30
⅜	4.00	[illegible]	5.75
7/16	3.70	[illegible]	5.45
½ and 9/16	3.50	[illegible]	5.25
⅝	3.40	[illegible]	5.15
¾	3.30	[illegible]	5.05
⅞	3.20	[illegible]	4.95
1	3.10	[illegible]	4.85
1⅛ and 1¼	3.20	[illegible]	4.95

Prices for hand-made chains are unchanged:

*Size in inches.	BBB crane chain.	BBB crane, dredge hoisting or steam shovel hoisting chain.	Special "Warwick" [illegible] hoisting chain.	Special "Trident" crane, steam shovel hoisting and dredge hoisting chain.
⅝	$7.95	$8.20	$9.15	$9.15
¾	7.15	7.45	8.45	8.45
⅞	7.67	6.90	7.90	...
1	6.15	6.40	7.15	...
1⅛	5.75	5.95	6.90	...
1¼	5.65	5.90	6.85	...
1⅜ to 1⅞.	5.55	5.75	6.80	...

*Thickness.

Nails.—The nail business shows very little change. Quotations are without change. Wire nails from Pittsburgh are selling at $1.70 per keg base in carload lots to retail merchants. In less than carload lots, an advance of 10 cts. per keg is desired. In New York, wire nails are sold at $1.95 per keg.

Lag Screws.—Cone point lag screws are sold at a discount of 80% from list. The net prices are as follows:

Length.	Diameter in inches—Net price per 100. ½-in.	¾-in.	1-in.
3½-in	$1.04	$2.12	$4.40
4 -in	1.11	2.26	4.66
4½-in	1.10	2.40	4.92
5 -in	1.25	2.47	5.18
6 -in	1.40	2.82	5.70
7 -in	1.59	3.10	6.22
8 -in	1.68	3.38	6.74
9 -in	1.83	3.66	7.26
10 -in	1.87	3.94	7.78
11 -in	2.11	4.22	8.30
12 -in	2.26	4.59	8.82

Spiral Riveted Pipe.—Prices continue unchanged from the last report. The prices given below are f. o. b. factory, freight equalized with New York City, being figured at a discount of 50, 10 and 10% from list.

They are for orders amounting to about $250. For large orders of several carloads, prices are from 12½ to 20% cheaper.

Diameter in ins.	*of steel, Birmingham wire gage.	Net price per 100 ft. With bolted joints complete. Plain.	Asphalted.	Galvanized.
3	20	$21.80	$14.21	$20.70
4	18	19.76	21.48	30.74
5	18	23.40	23.70	37.14
6	16	33.05	35.76	49.73
7	16	37.58	40.76	56.82
8	16	43.17	46.80	65.00
9	16	50.06	54.10	74.22
10	14	66.42	71.08	96.15
11	14	71.20	76.57	102.24
12	14	83.75	89.15	118.30
13	14	89.67	96.55	127.98
14	14	99.14	105.51	138.85
15	14	108.05	114.89	151.92
16	14	117.53	124.82	166.58
18	12	167.43	175.95	226.44
20	12	183.79	193.30	248.39
22	12	200.48	210.64	269.21
24	12	219.92	231.07	293.99
26	10	280.20	292.41	370.78
28	10	301.32	314.89	395.37
30	10	324.81	399.15	430.64

*Made in both lighter and heavier gages at corresponding differences in price.

Wire.—Lower prices have been named on wire, but no increase in the volume of business has followed. The base price for large lots f. o. b. Pittsburgh is $1.35 for annealed and $1.65 for galvanized. In New York, carload lots to retailers are sold at $1.40 for annealed and $1.80 for galvanized. Less than carload lots are held at an advance of 10 cts. All these quotations are per 100 lbs.

Switch Points.—The following prices are named f. o. b. mill, for switch points in lots of ten or more pair: for 60-lb. rail, 10-ft. points, $16.25; 15-ft. points, $17.50; for 70-lb. rail, 10-ft. points, $18; 15-ft. points, $25; for 80-lb. rail, 10-ft. points, $25.50; 15-ft. points, $27.75; for 90-lb. rail, 15-ft. points, $30.50; for 100-lb. rail, $33.50. All of the above are furnished with three rods, except the 90-ft. points for 60 or 70-lb. rail, which have only two.

Bolts.—Prices are unchanged from last month. The discount on common carriage bolts is 75 and 10% on bolts ½ × 6-in. and smaller. On larger and longer bolts the discount is 70 and 10%. At these discounts the net prices are as follows:

Length ins.	Diameter inches—Net price per 100. ⅜	½	¾
4	$0.62	$0.99	$2.34
5	0.68	1.13	2.57
6	0.75	1.23	2.84
7	0.99	1.35	3.05
8	1.08	1.46	3.32
9	1.16	1.58	3.55
10	1.24	1.70	3.80
12	1.42	1.94	4.30
14	1.59	2.18	4.80
16	1.77	2.42	5.28
18	1.94	2.65	5.78
20	2.10	2.88	6.30

Frogs.—For mill shipments of ten or more, prices are as follows: Bolted frogs, No. 7, for 60-lb. rail, $15; for 70-lb. rail, $16.50; for 80-lb. rail, $18; No. 8 frogs for 90-lb. rail, $21; for 100-lb. rail, $23. Plate frogs, No. 7, riveted to ⅜-in. plate for 60-lb. rail, $18; for 70-lb. rail, $20; for 80-lb. rail, $21.50. No. 8 frogs bolted to a ⅜-in. plate for 90-lb. rail are $25.50; for 100-lb. rail, $27.50.

REINFORCING MATERIAL.

Triangular Mesh.—The high records established in October still stand, but the volume of business taken in November was large and exceeded that of the same month last year. A contract for over half a million yards was taken for dock work in Brooklyn.

The following quotations are per 100 sq. ft. in lots of the size named, f. o. b. mill in Pittsburgh district:

Price per 100 sq. ft.

Style No.	Cross sec. area per ft. width.	Carload lots.	Less than Carloads and over 10,000 sq. ft.
*4	.102	$0.97	$1.18
5	.077	.77	.94
6	.058	.61	.74
*7	.041	.47	.58
*23	.170	1.62	1.98
24	.142	1.40	1.71
25	.124	1.24	1.51
*26	.110	1.13	1.38
*27	.085	.92	1.13
28	.066	.77	.94
29	.049	.63	.77
31	.261	2.39	2.92
32	.225	2.07	2.53
33	.196	1.85	2.26
34	.146	1.42	1.73
35	.109	1.13	1.38
36	.075	.83	1.02
*38	.380	3.40	4.15
39	.324	2.93	3.58
40	.283	2.57	3.14
41	.208	1.96	2.39
*42	.151	1.49	1.82
43	.101	1.06	1.29

This material is made in regular widths of 18, 22, 26, 30, 34, 42, 46, 50, 54 and 58 ins. Standard lengths of rolls are 150, 300 and 600 ft. Cutting to special lengths is charged extra.

Expanded Metal.—Quotations are without change as follows:

Mesh.	Gage-stubbs.	Designation.	Weight per sq. ft.	Sectional area per ft. width.	Price per sq. ft. in cts. Carload.	10,000 sq. ft. to carload.
½-in.	18	Standard	.74	.209	3.71	4.04
¾-in.	13	Standard	.80	.225	3.69	4.03
1½-in.	12	Standard	.70	.207	3.43	3.76
2 -in.	12	Standard	.56	.166	3.20	3.48
3 -in.	13	Standard	.28	.087	1.32	1.44
3 -in.	10	Light	.50	.148	1.55	1.69
3 -in.	10	Standard	.60	.178	1.80	1.97
3 -in.	10	Heavy	.90	.267	2.46	2.69
3 -in.	10	Extra heavy	1.20	.356	3.18	3.47
3 -in.	6	Standard	1.38	.400	3.85	4.20
3 -in.	6	Heavy	2.07	.600	5.64	6.16
4 -in.	16	Old Style	.42	.093	1.78	1.94
6 -in.	4	Standard	.84	.245	2.42	2.64
6 -in.	4	Heavy	1.26	.368	3.38	3.68

Bars, Concrete Reinforcing.—Some sales for very large tonnage have been made as low as 1.05 cts., Pittsburgh, but it has to be a very attractive tonnage that can be placed at less than 1.10 cts., while some sales have been made at 1.15 cts.

The net price of bars of various sizes f. o. b. mill are as follows:

	Cts. per lb. Plain.	*Deformed.
¾-in. & larger	1.10 to 1.30	1.15 to 1.25
⅝-in.	1.15 to 1.25	1.20 to 1.30
½-in.	1.20 to 1.30	1.25 to 1.35
⅜-in.	1.25 to 1.45	1.40 to 1.50
¼-in.	1.60 to 1.70	1.65 to 1.75

Bars from stock, Pittsburgh, are usually cut to the required length without extra charge. Prices per lb. are as follows:

	Cts. per lb. Plain.	Deformed.
¾-in. & larger	1.30 to 1.40	1.40 to 1.50
⅝-in.	1.35 to 1.45	1.45 to 1.55
½-in.	1.40 to 1.50	1.50 to 1.60
⅜-in.	1.55 to 1.65	1.65 to 1.75
¼-in.	1.80 to 1.90	1.90 to 2.00

*The price of deformed bars varied according to the shape, and some are held much higher than these prices.

LUMBER.

The inquiry for lumber has been limited, but stocks have been cleaned up and there is not going to be the activity in cutting timber there was both last year and the year before. In consequence, prices may be somewhat stiffer during the coming year.

Long Leaf Yellow Pine.—Prices continue unchanged, and for delivery, for material classed as "Merchantable" under the 1905 rules of the Association, prices are as follows:

Prices per Thousand Feet in Yard, New York.

	Length. 20 ft. base.	21 to 25 ft.	26 to 30 ft.	31 to 35 ft.
2 in. wide and under by 8 in. thick and under	$31	$32	$33	$34
10 in. wide by 10 in. thick and under	33	34	35	36
12 in. wide by 12 in. thick and under	36	37	38	39
14 in. wide by 14 in. thick and under	43	44	46	46
16 in. wide by 16 in. thick and under	45	46	47	48

For pieces longer than 35 ft. and less than 40 ft., add from $4 to $8 to base price.

Spruce.—The demand is fair, but no change has been made in prices. In Boston wholesale prices are as follows:

	Per 1,000 ft.
9-in. and under	$23.50 to $24.00
10 to 12-in	23.50 to 24.00
2 × 4-in. random	20.00 to ....
2 × 6-in. random	19.50 to 20.00
2 × 8-in.	21.50 to 22.00
2 × 10-in.	22.50 to 23.50
2 × 12-in.	22.50 to 23.50

Flooring.—The demand is less than a month ago, but prices continue unchanged. Quarter-sawed oak flooring, A1, is $95 per m. Selected, quarter-sawed, white oak or red oak flooring is $52 per M., and common oak flooring, red or white, is $30 per M.

Maple flooring, 13/16 × 2 ins., is $44 for clear; $37 for No. 1 and $24 for factory.

Long-leaf yellow pine flooring, 13/16 × 2½ face, is $55 to $60 for A heart rift; $40 for sap rift; $28 to $30 for flat rift and $22 to $23 for No. 1 common flat grain.

Hemlock.—Prices continue without change at $20.50 for West Virginia and $21 for Pennsylvania.

Price Per Thousand f. o. b. cars, New York.

Size.	Length. 10 ft.	12 ft.	14 ft.	16 ft.
2 × 4-in.	$23.00	$21.00	$21.00	$23.00
2 × 6-in. to 2 × 10-in.	21.00	21.00	21.00	18.00 to 19.00
3 × 4-in. to 12 × 12-in.	21.50	21.50	22.00	19.00 to 20.00
1 × 8-in.	....	18.00	18.00	18.00
1 × 10-in. & 1 × 12-in.	....	18.50	18.50	18.50

Lath.—The price is steady. In Boston 1⅝-in. sells at $3.75 and 1½-in. at $3.40 to $3.50.

Piles.—Oak piles are held at 20 to 22 cts. per lin. ft. Oak piles, 14-in. in diameter, 2 ft. from butt with a 6-in. top, and 40 to 45 ft. long, are held at $9.50 f. o. b. New York; 45 to 50 ft. long, 25 cts. per lin. ft. Pine piles, 25 ft. long, 12-in. in diameter, 2 ft. from butt, with a 7-in. top, are held at 17 cts. per lin. ft., while those 25 ft. long are 16 cts. In general pine piles can be had at 16 to 17 cts.; oak piles, 55 to 60 ft., are quoted at 23 cts. per lin. ft.

Cross Ties.—The month has been dull for this trade. No large orders have been received and the demand is generally poor. The following approximate prices, quoted by G. S. Baxter Co., 15 William St., New York, show an increase of 6 cts. over last month:

	Cts. each.
7 × 9-in. by 8 ft. 6-in.	81
6 × 9-in. by 8 ft. nominal	78
6 × 8-in. by 8 ft.	73

CLAY PRODUCTS.

Roofing Tile.—Prices are steady and continue without change. The best grade for promenade roofing tile in flat blocks for high-grade roofs is sold at $20 per M. for run of kiln, and $30 per M. for selected. A cheaper form of tile with a smooth surface can be had at $10 to $12, but it is not suitable for roof gardens. These prices are for 9 × 9-in. blocks, f. o. b. factory. It requires 258 blocks to lay 100 sq. ft. of roof surface, and, in consequence, the price per 100 sq. ft. of roof surface would be $4 to $5 for the smooth blocks; $7.82 for run of the kiln and $10.73 for the selected.

Vitrified tile, unglazed, of the French or Spanish type, is sold at approximately $8.50 per 100 sq. ft. of roof surface, f. o. b. factory. Glass tiles are sold at 60 cts. each. It requires 183 of these for 100 sq. ft. of roofing.

Hollow Tile.—The demand is only fair.

Prices for hollow wall building tile, f. o. b. factory, Perth Amboy, N. J., are without change, as follows:

Size.	Price per block, in cts.
4 × 12 × 12-in.	5.25
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	10.5
10 × 12 × 12-in.	10.5
12 × 12 × 12-in.	12.1

Fireproofing partition blocks are unchanged as follows:

Size.	Price per block, in cts.
2 × 12 × 12-in.	4.4
3 × 12 × 12-in.	4.4
4 × 12 × 12-in.	5.
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.8

These prices are for what would be considered small orders—approximately carload lots. For quantities which exceed $1,000 worth of material concessions will be made.

Duct Telephone.—Small lots are sold at 4½ to 5 cts. per duct ft., but considerable concessions are made for desirable orders.

Sewer Pipe.—Prices are without change. The discounts applying to the Eastern list are as follows: for all sizes from 3 to 24 in., inclusive, 88% discount; for 27 and 30 in., 80% discount; for 33 and 36 in., 75% discount. At these discounts the net prices per foot for carload lots f. o. b. factory are as follows:

3-in.	..	$0.024
4-in.	..	.03
5-in.	..	.036
6-in.	..	.048
8-in.	.066	..
10-in.	.096	..
12-in.	.12	..
15-in.	.162	..
18-in.	.227	..
20-in.	.27	..
21-in.	.325	..
22-in.	.36	..
24-in.	.39	..
27-in.	.90	..
30-in.	1.10	..
33-in.	1.56	..
36-in.	1.75	..

Flue Lining.—Prices continue without change. The discount from list, f. o. b. mill is 85%. Delivered in New York, in small lots, they can be had at 78%. Based on a discount of 85% at the mill, net prices are as follows:

	Weight in lbs.	Price per ft.
4½ × 8½-in.	14	$0.04½
4½ × 13 -in.	20	.068
4½ × 18 -in.	40	.015
6 × 12 -in.	22	.075
7 × 7 -in.	15	.053
8½ × 8½-in.	18	.068
8½ × 13 -in.	28	.098
8½ × 18 -in.	45	.135
12 × 16 -in.	45	.15
13 × 16 -in.	38	.128
13 × 18 -in.	57	.18
14 × 16 -in.	60	.165
16 × 16 -in.	65	.24
16 × 20 -in.	80	.30
18 × 20 -in.	75	.30

MILL SUPPLIES.

Shafting.—Although the demand shows a marked improvement and orders are now being received in larger volume than for months, it is the result of lower prices named by manufacturers.

Cold rolled shafting is quoted at 60 and 10% to 65% discount for carload lots and 60% discount for smaller quantities.

The following net prices per foot are based on the discount of 60%:

COLD ROLLED SHAFTING.

Diameter, ins.	Cts. per ft.*
¾	3.30
1	5.85
1¼	9.15
1½	12.00
1¾	16.32
2	21.30
2¼	26.98
2½	33.36
2¾	40.36
3	48.12
3½	64.80
4	1.02
4½	1.40
5	1.89
5½	2.42
6	3.08

Chain Belting.—Prices are without change and the demand is fair.

From 3 HP. to 10 HP., 30-in. centers complete, with two sprockets, $7 to $8 per HP.; from 10 HP. to 25 HP., 36-in. centers complete, $5 to $6 per HP.; from 25 HP. to 100 HP., 60-in. centers complete, $4 to $5 per HP.; from 100 HP. to 500 HP., 72-in. centers complete, $3 to $4 per HP.

Belting.—The market continues inactive with prices unchanged.

Discounts on rubber belting are as follows: Best grades, 40 and 10% to 50%; standard, 50 and 10% to 60%; competitive grades, 60, 10 and 10% to 70%. The discounts on leather belting are unchanged as follows: Extra heavy, 60%; heavy, 60 and 5%; medium, 70%; light, 70 and 5%; standard, 70 and 10%.

Hides are scarce and an advance in leather belting would not be improbable.

The following net prices per foot of leather belting are computed at the above discounts. The price of rubber belting is as stated, unchanged from last month, and the prices may be found on page 199 in the issue of Nov. 2.

LEATHER BELTING, PRICE PER FOOT.

Width, ins.	Extra heavy.	Medium.	Standard.
1	$0.095	$0.072	$0.065
1½	.144	.108	.097
2	.192	.144	.12
2½	.24	.18	.162
3	.29	.215	.194
3½	.35	.252	.227
4	.385	.29	.26
5	.48	.36	.325
6	.58	.433	.39
7	.68	.50	.455
8	.77	.58	.52
9	.86	.65	.58
10	.96	.72	.65
11	1.05	.79	.71
12	1.15	.87	.78
14	1.35	1.01	.91
16	1.53	1.15	1.03
18	1.73	1.30	1.17
20	1.93	1.45	1.30
22	2.10	1.58	1.42
24	2.30	1.73	1.55
26	2.50	1.88	1.69
30	2.87	2.16	1.95
36	3.97	2.60	2.34
48	4.62	3.48	3.10

Packing.—The demand is good. Prices continue unchanged for original packages in small lots.

Asbestos wick and rope, 13 cts.; sheet rubber, 11 to 13 cts.; pure gum rubber, 40 to 45 cts.; red sheet, 40 to 50 cts. Cotton packing can be had at 16 to 25 cts.; jute at 3¼ to 3½ cts., and Russian at 9 to 10 cts.

High-Speed Steel.—The demand is less than last month. Prices are without change at 50 to 75 cts. per lb.

Fire Hose.—Prices of hose are unchanged. The standard grade of underwriters' cotton rubber-lined hose, 2⅝-in. diameter, warranted, 350 lbs pressure, is sold in 50-ft. lengths, complete with couplings, at 65 cts. per ft. Common hose, 2½-in. diameter, tested to 200 lbs. pressure, is 35 cts. per ft.

Lubricating Oils.—Quotations continue without change, the following figures being named for 5-bbl. lots.

	Cts. per Gal.
*Cylinder, dark	20 to 27
*Cylinder, steam, refined	14 to 22
Neutral Oils, filtered:	
Stainless white, 32 to 34 gravity	28 to 29
Lemons, 33 to 34 gravity	17 to 19
Dark, 32 gravity	15 to 18
Crank Cast Oil	15 to 17

*Prices are according to test.

Cotton Waste.—Prices are much lower due to an enormous crop of cotton. Prices of cotton waste in bales of 100 to 500 lbs. are as follows: No. 1 White Picked Cotton Waste, 8¾ cts. per lb.; No. 3 is 7¾ cts.; No. 1 Colored, 5½ cts.; No. 3 Colored is 4¾ cts.

OILS AND PAINTS.

Petroleum Products.—The demand is seasonable and all prices are without change. The price of crude oil in bbls. as quoted by the Standard Oil Co. or its subsidiaries is unchanged as follows: Pennsylvania, Second Sand, and Tiona, $1.30; Mercer black, 87 cts.; Corning, 77 cts.; New Castle, 84 cts.; Illinois, 65 cts.; Illinois heavy, below 30 gravity, 55 cts.; Kansas heavy, 30 cts.

In New York petroleum from tank wagon is unchanged at 6 cts. and auto naphtha and stove gasoline are likewise without change at 12¾ cts. per gal.

Fuel oil is 2.50 cts. per gal. or $1.15 per bbl. of 52 gals. in carload lots f. o. b. New York.

Linseed Oil.—Prices have declined due to heavy arrivals of seed. Seed has declined about 40 cts. per bushel and can be had at $1.98 for spot while futures are held at $2.03. Consumers are only purchasing in moderate quantities in spite of the fact that prices are from 15 to 20 cts. per gal. lower than a month ago.

Linseed oil is held at 75 to 77 cts. per gal. in 5-bbl. lots. Boiled oil is held at the usual advance of 1 ct. per gal. over raw.

Spirits Turpentine.—The market is slightly firmer due to smaller receipts at primary points and a somewhat larger demand. In New York spirits turpentine is sold at 50 cts. per gal. in 5-bbl. lots.

In Savannah, Ga., the price is 46½ to 47 cts. and in Charleston, S. C., 46½ to 46¾ cts.

Paints.—A revised schedule of prices has been issued by the leading manufacturer of white lead in oil which makes a reduction of ½-ct. per lb. White lead in oil in 100, 250 and 500-lb. kegs is now sold at 7 cts. per lb., in 25 and 50-lb. kegs at 7¼ cts. Red lead and litharge in lots of 500 lbs. and over is 1 ct. per lb. cheaper at 7 cts.

Graphite paint is unchanged at $1.40 per gal.

Hydrex preservative paint is 75 cts. per gal. in bbl. lots, New York City.

Colors in oil are quoted at the following prices per lb.: Lamp black, 12 to 14 cts.; Chinese blue, 36 to 46 cts.; Prussian blue, 32 to 36 cts.; Van Dyke brown, 11 to 14 cts.; Chrome green, 12 to 16 cts.;; Raw or Burnt Sienna, 12 to 15 cts.; Raw or Burnt Umber, 11 to 14 cts.

LINE CONSTRUCTION.

Aluminum Wire.—Some large work is in prospect in the West. The price continues unchanged at 31 cts. per lb. base.

Poles.—Cedar poles are quoted as follows by the R. D. Dowie Pole Co., New York Block, Seattle, Wash. The price is f. o. b. loading point.

Length in ft.	Diameter at top 8-in.	Diameter at top 9-in.
30	$2.70	....
35	3.15	$3.50
40	3.60	4.00
45	....	4.50
50	....	5.00
55	....	5.50
60	....	7.20
65	....	9.75
70	....	10.50
75	....	11.25
80	....	12.00

Chestnut poles f. o b. Mechanicsville, N. Y., are quoted by T. C. Luther of that place as follows:

Length in feet.	Price each. Diameter at top 5-in.	6-in.	7-in.
25	$1.50	$2.00	$2.75
30	2.50	2.75	3.50
35	2.75	3.25	4.25
40	3.25	4.00	5.50
45	4.00	5.50	7.50
50	5.50	7.50	9.50

Fir Cross Arms.—Prices are unchanged, as follows:

Size, 3½ × 4-in.	Price per arm in cts. Pacific Coast.	Chicago.	New York.
3 ft., 2-pin	8	13½	15½
4 ft., 2-pin	11	18½	21
5 ft., 4-pin	16	26½	28½
6 ft., 4 and 6-pin.	20½	31½	36
8 ft., 6 and 8-pin.	28	42	48½
10 ft., 8, 10 and 12-pin	37	55½	67½

Telegraph Wire.—For lots of fair size, the wire measured in Birmingham wire gage, the prices in cts., per lb., are as follows: "Extra Best Best," Nos. 6 to 9, 4⅜ cts.; Nos. 10 and 11, 4½ cts.; No. 12, 4⅝ cts.; No. 14, 5⅛ cts. "Best Best," Nos. 6 to 9, 3½ cts.; Nos. 10 and 11, 3⅝ cts.; No. 12, 3½ cts.; No. 14, 4 cts. Actual freight is allowed from Trenton, N. J., where it does not exceed 25 cts. per 100 lbs.

Insulators. — Prices are without change. Glass insulators in lots of more than 1,000 and less than 10,000 are sold at the following prices per 1,000: Double petticoats, 20 oz., $33; Western Union, $30.25; No. 2, cable, $53.90; No. 4 cable, $210; Muncie type, 7-in., $236.50; No. 3 triple petticoat, 4½-in., $90.75.

Copper Wire.—An advance to 14.50 cts. base was announced Nov. 29. At the present price of ingot copper there is only a small margin left for the manufacturer.

METALS.

Copper.—A notable improvement has taken place in the copper trade, but there is as yet no scarcity of copper, nor any likelihood of any for several months to come. The statistics compiled by the Copper Producers' Association showed that the production during October was 118,000,000 lbs., an increase compared with the previous month of over 2,000,000 lbs. Domestic deliveries were 64,000,000 lbs., an increase of 7,000,000 lbs. compared with September. The exports were 60,000,000 lbs., an increase of 9,000,000 lbs., and the stocks at the end of the month were 135,000,000 lbs. compared with 141,000,000 lbs. the end of the preceding month. Stocks are now the smallest of any month this year except August, when exports were unusually large. The consumption of copper abroad has been excellent, and, although buyers hesitated to make any purchases during October on account of the diplomatic situation, they purchased freely during November. Domestic consumers likewise bought copper not only for their immediate needs, but for future delivery, and these purchases advanced quotations, until toward the end of the month Electrolytic was selling at 13 cts. and Lake at 13.25 cts. The copper situation, although it has shown a material improvement, bears many of the ear marks of manipulation; this is, however, the only unfavorable features. A speculator, noted for his daring moves, has been openly predicting much higher prices for copper, and moreover the price of copper securities has advanced rapidly. Electrolytic is now selling at 13.12½ to 13.25 cts. and Lake at 13.25 cts.

Pig Tin.—The statistics compiled regarding the tin situation showed that visible supplies are materially less than they were a year ago, and stocks in New York are small. During most of the month a premium has been demanded for prompt shipments of tin, and sales have been made as high as 43 cts. The lowest figure of the month was 41½ cts. during the first part of November. In the first few days of December prices advanced rapidly due to an increased demand and tin is now selling at 45.25 cts.

Lead.—The market has advanced rapidly. The American Smelting & Refining Co. was taking business at 4.25 cts. New York a month ago, advanced its quotation to 4.35, and then to 4.35½ cts. The price in the West was moved up to 4.35½ cts. This unusual difference between the price in New York and in St. Louis, less now than a week ago, it is true, can only be accounted for by the fact that consumers in the East have bought freely, and have sufficient stock on hand to last for some time, while those in the West are still anxious to buy. Moreover, it is probable that the leading interest is trying to replenish its own stock from the outside market.

	Per lb.
Sheet Lead:	
Large lots	6.25 cts.
Small lots	6.75 cts.
Lead pipe:	
Large lots	5.75 cts.
Small lots	6.40 cts.

Spelter.—The price of spelter has advanced rapidly. Early in the month 6.30 cts. was quoted, and even at this figure there was very little demand, but later the galvanizing works became more active buyers and the price advanced to 6.95 cts. New York. This is the highest quotation since the early part of 1907, when 7 cts. was paid. There is an interesting sidelight on the present spelter situation, and that is the theory advanced by some in the steel trade that the spelter market was being made to appear very strong so that there will be an opportunity to advance the quotation for galvanized sheets, a portion of the theory being that some of the large sheet makers have covered their requirements as far as spelter is concerned at much lower figures.

Roofing Copper.—The demand shows a fair improvement, heavy sheets being in far better requisition than light. Prices are maintained at 16 cts. to 16½ cts. base.

Old Metals.—Miscellaneous lots of scrap metal, amounting to about a ton, can be sold to dealers in New York at about the following prices:

	Cents.
Copper, heavy & crucible.	10.75 to 11.00
Copper, heavy and wire..	10.50 to 10.75
Copper, light and bottoms	9.50 to 9.75
Brass, heavy	7.00 to 7.25
Brass, light	5.50 to 5.75
Heavy mach. composition.	9.25 to 9.50
Clean brass turnings	7.00 to 7.25
Composition turnings	8.25 to 8.50
Lead, heavy	....to 3.75
Lead, tea	....to 3.50
Zinc, scrap	....to 4.00

Miscellaneous Metals.—Small lots of metal and metal products can be obtained from jobbers' stores, New York, at the following prices:

	Per lb.
Bismuth	$2.25
Brass tubes, iron pipe sizes:	
½-in.	.19
¾ to 3-in.	.18
3½-in.	.19
4-in.	.20
Brass sheets	.14¼
Brass rods	.14¼
Solder, ½ and ½ guaranteed	.27½
Zinc, sheets	.08½
Manganese bronze rods	.16
Manganese bronze in crucible form	.14
Monel metal, ingot	.16

MISCELLANEOUS.

Waterproofing.—The prices for carload lots, f. o. b. cars New York, are as follows: Hydrex waterproofing felt, $1.25 per 100 sq. ft.; Hydrex compound "A," 26 cts. per gal.; Hydrex compound "B," 18 cts. per gallon.

Texaco waterproofing cement is $30 per ton in car lots, f. o. b. cars New York or Philadelphia.

Asphaltum for waterproofing is sold at $26 to $27 per net ton.

Glidden, graphic acid proof coating is sold at $1.25 per gal. in bbls. and ½ bbls., and $1.40 per gal. in 5-gal. cans. These prices are f. o. b. Cleveland or for delivery from warehouse, New York, Chicago, St. Louis, Boston or Atlanta.

Roofing Slate.—Prices are steady and unchanged but trade is dull. Quotations are named for "square" or 100 sq. ft. of roof surface in carload lots of the sizes in most general use, f. o. b. quarry station:

	Prices per 100 sq. ft.
Vermont, sea green	$3.50 to $4.10
Pennsylvania, Bangor Ribbon	3.50 to 4.00
Maine, Brownsville No. 1..	5.00 to 7.75
Maine, Brownsville No. 2..	4.50 to 6.00
No. 1 Red	10.50 to 12.00
Unfading Green	4.00 to 5.50
Genuine Bangor	4.00 to 6.50
Pen Argyle	4.00 to 5.50

Rope.—The market continues steady and prices are without change as follows:

Pure Manila is 8½ to 9 cts. per lb.; second grade, 7½ to 8 cts.; hardware grades, 7 to 7½ cts. per lb. Pure Sisal is 6½ cts. for the highest grades, and 6 cts. for less desirable grades. Jute rope in commercial sizes is 6 to 6½ cts. per lb.

Roofing Cement.—Prices are unchanged at $25 per ton for Texaco.

Explosives.—Dynamite of the kind usually used by contractors is approximately 11 to 13 cts. per lb., f. o. b. factory, in ton lots. Blasting powder, classified as "soda" grade, is sold at $1.20 to $1.40 per keg, of 25 lbs., in lots of 10,000 lbs. The following prices prevail on Trojan in carload lots, minimum, 24,000 lbs., f. o. b. Pacific Coast points: No. 1, 13½ cts.; No. 2, 10½ cts.; No. 3, 10 cts. They have a disruptive force equivalent to 60%, 40% and 30% of nitro-glycerine.

Exploders, per hundred, are sold at the following prices: 4 ft., $3.60; 6 ft., $4.10; 8 ft., $4.60; 10 ft., $5.10; 12 ft., $5.60; 16 ft., $6.60; 20 ft., $7.50; 20 ft., $9.40; 30 ft., $12; 36 ft., $14.60.

Caps in lots of 10,000 are $7 to $8 per thousand.

Blasting machines for 10 holes are $12; 25 holes, $20; 50 holes, $40; 100 holes, $60.

Asbestos.—Asbestos building felt and sheathing in less than ton lots is 3½ cts. per lb. for the light, weighing from 6 to 30 lbs. per 100 sq. ft.; 4 cts. per lb. is charged for the heavy, weighing from 45 to 56 lbs. per 100 sq. ft.

Millboard is made in standard sheets, 40 × 40 ins., and 41 × 40 ins. It varies in thickness from 1/32 to ½-in. and in weight from 2 to 27 lbs. per sheet. The net price in 100-lb. lots is 5 cts. per lb.

Transite, asbestos wood, used for fireproofing, ventilators and smoke jacks, comes in standard sheets, 36 × 48 ins., 42 × 48 ins., and 42 × 96 ins. The prices, f. o. b. factory, Nassau, N. H., are as follows:

Thickness.	Weight.	Price.
⅛-inch	1 lb.	$0.08
3/16-inch	1½ lbs.	.12
¼-inch	2 lbs.	.16
5/16-inch	2½ lbs.	.20
⅜-inch	3 lbs.	.28
7/16-inch	3½ lbs.	.28
½-inch	5 lbs.	.32
9/16-inch	4½ lbs.	.36
⅝-inch	5 lbs.	.40
¾-inch	6 lbs.	.44
⅞-inch	7 lbs.	.48
1-inch	8 lbs.	.52
1¼-inch	10 lbs.	.56
1½-inch	12 lbs.	.64
1¾-inch	16 lbs.	.72
2-inch	16 lbs.	.80

Paper.—Prices are unchanged from last month, as follows:

Tarred Paper:	Per roll of 100 sq. ft.
Standard, 2-ply, 40 lbs.	$0.40 to $0.45
Extra heavy, 2-ply, 45 lbs.	.50 to .55
Standard, 3-ply, 60 lbs.	.60 to .65
Extra heavy, 3-ply, 70 lbs.	.70 to .75

Rosin, Sized Sheathing:	Per roll of 500 sq. ft.
Light, 25 lbs.	$0.38
Medium, 30 lbs.	.45
Heavy, 40 lbs.	.60

Lighterage Limits.—The free delivery or "Lighterage Limits" in New York City are as follows: In Manhattan, from a point opposite the Fort Lee ferry, south along the Hudson River around the Battery and north along the East and Harlem Rivers to the Jerome Ave. Bridge at 155th St. In New Jersey, south from Fort Lee ferry to Bayonne City, points on the north and east shores at Staten Island, between Bridge Creek (Arlington) and Clifton, both inclusive, and including Elm Park, Erastina and Shooters Island. In Brooklyn, from 69th St., Bay Ridge, north to Port Cove, Astoria, Long Island City.

Rubber.—The prices of rubber have advanced moderately during the month, due to a better demand from consumers all over the world. Consumers seem to be buying only as their needs warrant, and are not anticipating future requirements to any extent. This is largely because of the unsold stocks of Brazilian rubber, as well as the new crop which must shortly come on the market from the Far East. Stocks in London and in New York, however, are not large and current requirements seem to absorb shipments from the producing countries.

Quotations are as follows: Up River Para, fine, $1.05; up River Para, coarse, 90 cts.; Caucho ball, 88 to 89 cts.; Guayale, 45 to 47 cts. African rubbers are again easier, Massal red being quoted 86 to 87 cts. and Niggers at 84 cts. Scrap rubber is likewise easier and reclaimers are paying 8½ cts. for automobile tires, 3¾ cts. for air brake hose, 1½ cts. for steam fire hose and 22 cts. for inner tubes.

INDUSTRIAL NOTES.

Sherburne & Co., 53 Oliver St., Boston, are now agents for T. L. Smith Co., Milwaukee, Wis., manufacturers of the Smith mixer.

Mr. Harry Yeo, of the Indiana Bridge Co., Muncie, Ind., has been made Sales Agent in St. Louis, Mo., with offices in the Third National Bank Bldg.

The Phoenix Iron Co., recently opened an office at 608 Hibernia Bank Bldg., New Orleans, La. Mr. F. E. Golian is Manager of this office, and will have charge of the trade in that territory.

The Sullivan Machinery Co., Chicago, Ill., announces that its office in Salt Lake City, Utah, has been moved to the Kearns Building, where the much-needed additional space has been secured. Mr. M. G. Doll is local manager.

The Standard Water Meter Co., of Brooklyn, N. Y., has organized the Standard Water Meter Co. of Texas, with Mr. G. K. Garson as manager. Mr. Garson has traveled extensively through Texas for the parent company. The offices will be located at Dallas.

Mr. R. Sanford Riley, who as President of the American Ship Windlass Co., developed the Taylor Stoker, has sold his interest there and has organized the Sanford Riley Stoker Co., at Providence, R. I., to exploit a new self-cleaning underfed stoker.

The Sandusky Portland Cement Co., Sandusky, Ohio, states that it has completed orders for five carloads of its Medusa White Portland cement for Sydney, Australia, and two carloads for Delagoa Bay, South Africa. Several thousand barrels wil be used on the Woolworth Building, New York.

The Westinghouse Electric & Manufacturing Co., Pittsburgh, is making two additions to their plant. A 4-story structure for the manufacture of electrical apparatus is being built in the rear of Section K, and a fireproof building for the manufacture of packing boxes, is under construction.

Mr. Frederick P. Cook, former secretary of the Milwaukee Locomotive Mfg. Co., Milwaukee, Wis., has been placed in charge of the New York Office with headquarters at 111 Broadway. Mr. Cook will handle the sale of Milwaukee gas driven locomotives in the states of New York and New Jersey, and will also look after the foreign business of the company.

The Concrete Steel Co., [illegible] Broadway, New York City, in order to further facilitate the handling of Western business, has opened a Chicago office in the Monadnock Block. This will enable the company to quote prices and ship materials to the middle west to much better advantage. Mr. F. C. Harper, formerly connected with a Chicago concrete construction concern, is in charge.

The Buying of Railway Equipment has ben extremely active since Nov. 1. Contracts have been entered into, or inquiries are out, for nearly 40,000 cars. The magnitude on this business can be appreciated from the following figures, which are taken from authoritative sources, regarding the car and locomotive orders during the last six years:

	Cars ordered.	Locomotives ordered.
1910	45,08[illegible]	3,787
1909	193,88[illegible]	3,350
1908	66,70[illegible]	1,182
1907	151,70[illegible]	3,382
1906	310,315	5,042
1905	341,31[illegible]	6,265

Private Pullman Cars conveyed a party of prominent engineers, road builders and city officials to the automobile races in Savannah, Ga., last week. They were guests of the Indian Refining Co., 17 Battery Place, New York, N. Y., under the personal charge of Mr. A. B. Chamberlain, General Sales Manager of the company. This company furnished the binder for the top dressing of the course both in 1910 and 1911, and it is significant to note that a new high record for automobile racing was established. One party left New York Nov. 27, joining a party in Washington, leaving Chicago a day earlier. They arrived in Savannah Nov. 29, and were immediately taken over the automobile course, and afterwards entertained by the Commissioners of Chatham County at an old-fashioned Georgia barbecue. The following day, Thanksgiving Day, was spent in witnessing the automobile races and inspecting the 17-mile course after the race was finished. The course, which was over country roads, was in excellent condition, after the 420-mile race, only a few soft spots appearing and these were the result of insufficient underdrainage rather than any fault of the top dressing.

In the party there were a number of county officials from Mechlenburg County, North Carolina, which was one of the first counties in the South to employ convicts on its roads. This county has a number of miles of improved waterbound macadam highways, and is now top dressing these highways with a bituminous binder. Early on the trip the party resolved itself into what may be termed a traveling congress of road builders.

Car orders during November were numerous.

The largest order has been from the New York Central System, which has already contracted for 12,000 cars and has inquiries in the market for 4,000 additional. The Chesapeake & Ohio has ordered 2,000 hopper cars; the Wichita Falls Ry. has inquiries in the market for 300, while the Algoma Central has inquiries for 60 box cars, and the Woodward Iron Co. is asking figures on 100 coal cars. The Buffalo, Rochester & Pittsburgh Ry. has purchased 1,000 freight cars; the Chicago, Milwaukee & St. Paul Ry., a like number; the Cambria & Indiana, 300 tank cars; the Chicago & Northwestern has figures on 3,300 freight cars, and the Lehigh Valley has purchased 50 box cars. The Baltimore & Ohio, which had inquiries in the market for several weeks for 4,500 hand-cars, has ordered 8,000 and is still negotiating for 1,000 more. The Southern Ry. has purchased 3,300 freight cars, and the Virginia & Southwestern Railway 65. The Delaware, Lackawanna & Western purchased steel underframes for 1,000 old cars, and the Missouri & North Arkansas Railroad placed orders for 100 freight cars. The Pennsylvania is in the market for a large number of cars.

The demand for motive power has not been so active. The New York Central has, within a month placed orders for 120 locomotives. The Nashville, Chattanooga & St. Louis have placed orders for three locomotives. The Philadelphia & Reading will build 20 switching locomotives in its own shops. The Canadian Northern has purchased 50 locomotives, and 1 rotary snow plow, while the Grand Trunk has bought 10 locomotives. The New Orleans & Great Northern has purchased 2 locomotives; the Southern Ry., 7, and the Chesapeake & Ohio has inquiries in the market for [illegible]5. The Pennsylvania has placed contracts for 3 Mallett and the Missouri Pacific for 1.

Passenger equipment business has been small, but practically all of it has been for steel cars, notably the Illinois Central for 115 and the Lehigh Valley for 25.

CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, December 7, 1911.

RAILWAYS.

(*Denotes that this work is advertised in *Engineering News*.)

✚New Jersey.—Pennsylvania R. R.—This company has let contracts to the KEYSTONE STATE CONSTRUCTION CO., and the JAMES McGRAW CO., Philadelphia, Pa., for the elimination of grade crossings at Rahway.

Pennsylvania.—Pennsylvania R. R.—This company is planning to spend $50,000,000 on improvements near Pittsburgh. The main line from the Union Sta. in Pittsburgh to Pitcairn, a distance of 15 miles, will be erected. Many grade crossings in this district will be eliminated.

Pennsylvania.—Baltimore & Ohio R. R.—This company will construct an underground crossing between Folsom and Prospect Park.

Virginia.—Maryland & Virginia Ry.—This company has been granted a charter for the construction of a 30-mile line from Nanch Station to Manassas. The headquarters will be at Alexandria. Alexander Sater, Alexandria, is Pres.

Florida.—Seaboard Air Line.—This company will soon begin improvements at its Jacksonville terminal. The estimated cost of expenditure is estimated at $1,000,000.

Indiana.—Lake Erie & Western R. R.—The State Railroad Commission of Indiana has ordered this company to eliminate a grade crossing near Noblesville.

Texas.—Texas, Kansas & Oklahoma Ry.—This company has been incorporated for the purpose of constructing a 100-mile line through Potter, Moore and Sherman counties. The general offices will be at Amarillo. F. T. Burnham, Kansas City, Mo., is an incorporator.

Texas.—Gulf, Texas & Western R. R.—It is reported that this company will construct a line from Seymour to Fort Worth, a distance of 25 miles.

California.—California Plumas Ry.—This company has been incorporated for the purpose of constructing a line from Sinclair to Big Meadow, touching at Indian Falls, Crescent Mills and Greenville en route. The distance is about 21 miles. H. C. Flournay is Pres.

California.—Tidewater & Southern R. R.—This company has made application for a franchise to construct a line from Stockton, through Modeste, to Turlock.

California.—Sacramento & Eastern R. R.—This company has been incorporated at a capital of $1,000,000, for the purpose of constructing a line from Sacramento, through Fair Oaks and Orange Vale, to Folsom, a distance of 20 miles.

Alberta.—It is reported that the government will proceed with the construction of two railways, one from Athabasca Landing to Peace River Cross, and the other from Edmonton to Fort McMurray. MacKenzie, Mann & Co. will be the builders and operators.

ELECTRIC RAILWAYS.

(✚*Denotes a contract awarded.*)

Rockland, Me.—The Rockland, South Thomaston & St. George Railway Co. contemplates purchasing new storage batteries. Alfred S. Black, 320 Main St., Rockland, is Pres. and Gen. Mgr.

Greenfield, Mass.—The Massachusetts Northern Ry. Co. has taken over the holdings of the Gardner, Westminster & Fitchburg Street Ry. Co., of Gardner, Mass., Connecticut Valley Street Ry., of Greenfeld, Mass.; Athol & Orange Street Ry. Co., of Athol, Mass., and the Templeton Street Ry. Co., of Templeton, Mass. Miller's Falls and Orange will be connected by a line and an extension to Winchendon will be built, which will give a through line from Boston to Greenfield.

Milford, Mass.—The Milford & Uxbridge Street Ry. Co. contemplates extending its line from Milford into the North Milford district. J. T. Manson, New Haven, Conn., is Pres.

New Rochelle, N. Y.—The Westchester Street R. R. Co., New Rochelle, has been granted permission to extend its line by the Public Service Commission, Second District.

Allentown, Pa.—The Lehigh Valley Transit Co., has been granted a franchise to double-track its line from Eighth St. and Hamilton St. across the Eighth St. Bridge to Ninth St. and the city limits. Noted Nov. 2.

Washington, D. C.—The Washington Ry. & Electric Co. contemplates building an extension of its line on Ninth St. H. W. Fuller, 14th and East Capitol Sts., Washington, is Gen. Mgr.

Weston, W. Va.—The Clarksburg & Weston Electric Ry. Co., Clarksburg, has applied to the City Council for a franchise to extend its line to Mount Clare.

Statesville, N. C.—Application will be made by the North Carolina Public Service Co., Greensboro, N. C., for a franchise to build a railway. E. C. Deal, Greensboro, is Gen. Mgr. and Pur. Agt.

Spartanburg, S. C.—A 50-year franchise has been granted to the Greenville, Spartanburg & Anderson Ry. Co., Greenville, S. C., to build a line over certain streets. Noted Oct. 26.

Meridian, Miss.—The Meridian Light & Ry. Co., is planning to build an extension of its line on Compress St.

✚Yazoo City, Miss.—The Yazoo Valley Electric Ry., Light & Power Co. has awarded a contract to JAMES H. COLLINS, of Chicago, Ill., to make a survey for the proposed interurban railway connecting Yazoo City and Canton. This line may later be extended to Jackson by way of Tougaloo, Ridgeland, Madison and Gluckstadt. H. Wise, Yaazoo City, is interested. Noted Oct. 25.

Covington, La.—A franchise has been granted to W. J. Tracy, of Cleveland, Ohio, to construct a railway from Slidell to Houltonville. This is a part of a line between Slidell and Hammond, and ultimately to Baton Rouge.

Barbourville, Ky.—See item under Light, Heat & Power.

Columbus, Ohio.—The Ohio & Southern Interurban Terminal & Depot Co., of Columbus, has been incorporated to extend the line owned by the Ohio & Southern Traction Line which at present runs from the city to the Pickaway County boundary line. Another purpose is to build a depot at Gay and Third Sts. The incorporators are S. B. Hartman, F. W. Schumacher, W. V. Baker, Earl S. Davis and James M. Butler.

North Dayton (Dayton postoffice), **Ohio.**—The People's Ry. Co., Dayton, has been granted a franchise to construct curves, switches and turnouts along the loop in North Dayton, in accordance with certain conditions made by the City Council. George C. Towle, 937 Washington St., Dayton, is Gen. Mgr.

East Youngstown, Ohio. — A franchise has been granted to the Mahoning & Shenango Ry. & Light Co. by the Village Council to double-track its line in East Youngstown.

Angola, Ind.—The Angola Light & Power Co. has been incorporated to take over the holdings of the Angola Ry. & Power Co. Improvements will be made. C. W. Morse, Angola, is Gen. Mgr. and Pur. Agt.

Crawfordsville, Ind.—The officials of the Crawfordsville & Western Traction Co. are planning to let contracts for the construction of a 45-mile extension from Crawfordsville, Ind., to Danville, Ill.

Indianapolis, Ind.—The Indianapolis, New Castle & Toledo Ry. will build its extention from Indianapolis to Muncie in the near future. M. E. Graston, 30 Union Trust Bldg., Indianapolis, is Gen. Mgr. and Pur. Agt.

Richmond, Ind.—Surveys will be made in the near future by the Eastern Indiana Traction Co., Richmond, along the line of its 85-mile railway connecting Hamilton, Ohio; Oxford, Ohio; College Corner, Ohio, and Richmond, Ind., Union City and Portland. Construction work will begin in the spring, it is stated. Sharon E. Jones is Pres.

It is reported that the Terre Haute, Indianapolis & Eastern Traction Co. is considering the construction of a branch line between Milton and Connersville. H. E. Smith, 663 Wabash Ave., Terre Haute, is Ch. Engr.

Winamac, Ind. — The Valparaiso-Monticello Traction Line Co., of which John L. Burton and James C. Fletcher are officials, has ordered a new survey for the construction of a line from Valparaiso to Monticello by way of Winamac, Knox, Wanatah and Bass Lake. The company plans to let contracts early in the spring.

Kensington (Chicago postoffice), **Ill.**—The Chicago, Lake Shore & South Bend Ry. Co., is planning to build a line from Kensington to Chicago, about 14 mile. C. N. Wilcoxon, Michigan City, Ind., is Gen. Mgr. and Pur. Agt.

Waukegan, Ill.—Contracts will soon be let by the Waukegan, Rockford & Elgin Traction Co., Waukegan, for a 7-mile extension of its line. Tracks will be relayed which will necessitate the purchase of 56-lb. or 60-lb. rails.

Milwaukee, Wis.—A franchise has been asked for by the Milwaukee Electric Ry. & Light Co. to build a crosstown line over the viaduct at 27th St.

Omaha, Neb.—Bids are being received by the Nebraska Transportation Co., Omaha, for material for its proposed railway connecting Omaha, Elk City, Arlington, Craig, Oakland, South Sioux City and Fremont. A single track from Omaha to Fremont will be built first. C. W. Baker, Omaha, is Pres.

✚South Fort Smith, Ark.—The Fort Smith Light & Traction Co. has awarded a contract to HAYS & PAYNE CO., for the grading work on its extension to South Fort Smith. Noted Sept. 28.

Corpus Christi, Tex.—W. E. Pope representing a Minneapolis, Minn., syndicate, will soon apply to the City Council for a franchise for the use of certain streets for a street railway system. About 14 miles of track will be built.

Glendale, Ariz.—The Phoenix Ry. Co. contemplates extending its Glendale line to Marinette. Samuel H. Mitchell, 1404 East Washington St., Phoenix, is Gen. Mgr. and Pur. Agt.

Salt Lake City, Utah.—Application for a franchise has been made by the Saltair R. R. Co., to the City Council to operate an electric railway over certain streets.

Fresno, Cal.—The Fresno & Eastern Ry. Co., has recently been incorporated and contemplates the construction of about 75 miles of railway, from Fresno to Shaver Lake. The incorporators are Fayette M. Meiggs, of Oakland, Cal.; Albert B. Dodd, of San Francisco, Cal., and George J. Aldrich, of Audubon, N. J.

Sacramento, Cal.—With the completion of the line of the Sacramento & Woodland Ry. Co. between Sacramento and Woodland, which is a branch of the Vallejo & Northern Ry. Co., work will be commenced through Solano County to Vallejo by way of Vacaville, Elmira, Fairfield, Suisun and Cordelia. Another branch from Elmira to Davis and Dixon is under consideration.

San Luis Obispo, Cal.—A franchise has been granted to Walter G. Lincoln, of this city, to build a railway in a northerly direction to Coalinga and easterly to Bakersfield.

Montreal, Que. — The Montreal & Southern Counties Ry. Co. is preparing for the construction of a railway from St. Lambert to Waterloo, about 69 miles. The line will be built during 1912, it is stated.

✚Bassano, Alta.—A contract has been awarded to the GORMAN, CLANCY & GRINDLEY CO., Calgary, for the construction of a 5-mile railway between Bassano and the irrigation dam owned by the Canadian Pacific Ry. Co.

Monterey, Mex. — See item under Light, Heat and Power.

LIGHT AND POWER PLANTS.

(*Denotes that this work is advertised in Engineering News.*)

Portland, Me.—The Southern Idaho Light, Heat & Power Co. has been incorporated to develop power and irrigation possibilities and engage in enterprises for the utilization of power or water. Incorporated at Portland. Clarence E. Eaton is Pres.; Albert F. Jones, Treas., and James E. Manter, Clerk.

✚Burlington, Vt. — A contract has been awarded by the Electric Light Commissioners to the WESTINGHOUSE ELECTRIC & MFG. CO., Pittsburgh, Pa., at $20,500, for a 750-KW. turbo-generator set and condenser, to be installed in the municipal electric-light plant. The city will build the foundation and the intake water pipe line from the lake, at an estimated cost of $3,000.

Leominster, Mass. — A new street-lighting system is proposed, and it is stated that plans for the installation are being prepared by the Leominster Electric Light & Power Co. The 115 arc lamps now in use will be replaced with 575 tungsten lamps, most of them to be of 40 c. p.

✚Boston, Mass.—A contract for the installation of one 15,000 KW. turbo-generator has been let to the GENERAL ELECTRIC CO., of Schenectady, N. Y., by the Edison Electric Illuminating Co., Boston.

New Haven, Conn.—Bids are being received for piping in the new addition of the power plant on Grand Ave., owned by the Connecticut Co., New Haven, E. S. Cooley, Superv. of Power Plants, New Haven, is Des. Engr.

✚Derby, Conn.—A contract has been awarded by the Derby Gas Co. to the BERLIN CONSTRUCTION CO., Berlin, Conn., for the structural steel work for its new buildings. M. A. Durrschmidt is the general contractor. Noted Nov. 16.

✚Albany, N. Y.—A contract for rewiring the Rochester State Hospital has been awarded to the ROCHESTER ELECTRIC MOTOR CO., at $6,350. Bids were opened Oct. 25.

Lewiston, N. Y. — Application has been made to the Public Service Commission by the Lewiston & Lake Ontario Shore Power Co. for permission to exercise franchises in Lewiston, Youngstown and Porter, and also for authority to begin construction of its plant and distributing system. Substations will be located in Lewiston, Youngstown and Ransomville, it is reported.

Saratoga Springs, N. Y.—Bids were opened on Nov. 30, for lighting the streets with gas or electricity, for a period of four years, and no award was made. New bids will be asked. Clarence Bird is Village Clk. and Street Comr.

Seneca Falls, N. Y.—Ernest G. Gould is conducting the negotiations for the organization of 15 owners of water-power rights on the Seneca River. The plan is to establish a central power station.

MASSACHUSETTS HIGHWAY WORK IN 1912.

A yearly appropriation of $500,000 has been granted to the Massachusetts Highway Commission for the last five years. The appropriation was exhausted in 1911, so the Commission now faces 1912 with no money available. The Legislature convenes Jan. 13, 1912, and will be asked to appropriate the funds necessary to defray the share of work done by the state. According to present plans, it is expected that a larger appropriation will be made the coming year.

The plan for highway improvement in 1912, if sufficient funds are available, is as follows:

Sections of improved highway will be completed in the towns of Sandwich, Plymouth and Bourne. This will complete the main highway from Boston to Truro, making it a complete line to Provincetown, as the latter town has built the portion within its limits. This would give improved highway practically the entire length of Cape Cod.

Another short section will be built in Falmouth, which will complete the highway between Buzzard's Bay and Wood's Hole.

A section in the Town of Florida over Hoosac Tunnel and one in Northfield along the Connecticut River Valley will also be built, and will connect with the highways being built by the States of Connecticut and New Hampshire.

The highway from Northampton to Pittsfield, through Windsor, will probably be completed.

In Ashburnham an additional section will be built toward Keene, N. H., to connect with the New Hampshire state system.

It is also planned to build sections from Worcester toward Providence by the way of Grafton, the Massachusetts line stopping at Blackstone.

A few short sections will be built between Boston and Fitchburg, completing the entire line between these two cities. Short lines are also contemplated between Springfield and Pittsfield, and it is possible that sections will be built in Sheffield and Great Barrington to complete what is styled the "under mountain road," making direct connections with the highways into New York and Connecticut.

In Massachusetts, the county pays one-fourth the cost of highways laid out and built by the Highway Commission, the state paying the remainder. The towns, as such, pay nothing, except where a special agreement is made between the towns and the state. The same ratio prevails for maintenance, except that the state may assess the town for a sum not to exceed $50 per road-mile, per year. The remainder is paid one-fourth by the county, and three-fourths by the state.

+New York, N. Y.—The city has awarded a contract to T. FRED JACKSON, INC., 94 John St., at $7,161 for electric lighting and power fixtures and wiring the Court House, City Hall Park, Borough of Manhattan.

Bids will be received by the Park Board at the office of the Department of Parks, Arsenal Bldg., Fifth Ave. and 64th St., Borough of Manhattan, until 3 p. m. Dec. 14 for furnishing and installing a new steam boiler in the Arsenal Building in Central Park.

Plans may be seen at the office of the Department of Parks.

Charles B. Stover is Pres., and Thomas J. Higgins, Michael J. Kennedy, Walter G. Eliot are Comrs. of Parks.

+Spring City, Pa.—A contract has been awarded to JOHN R. WIGGENS & CO., Philadelphia, Pa., at $214,423 for the power house and laundry complete to be erected at the Eastern Pennsylvania Institution for Feeble Minded and Epileptic. Noted Oct. 5.

Tryon, N. C.—The Hoke-Hill Real Estate & Investment Co. proposes to construct a hydroelectric power plant to supply electricity for lamps and motors. William Farr, of Asheville, N. C., and F. G. Rogers, of Greenville, S. C., Engrs., are making an inspection of the water power. D. M. Hoke, of Greenville, S. C., is Pres.

Cuthbert, Ga.—Sufficient bonds have been sold, it is stated, to enable the city to make the proposed improvements to the municipal electric-light plant and water-works system.

Jackson, Ga.—Bonds, amounting to $12,000, have been sold by the city, and improvements will be made to the municipal plant. Electricity will be used instead of steam. The Central Georgia Power Co., located on the Ocmulgee River, near Jackson, will furnish the electricity.

Manchester, Ga.—Bids will be received in February for the construction of the electric light plant, it is stated. The cost is estimated at $5,000. J. S. Peters is City Clk.

Brooksville, Fla.—See item under Water Supply—Irrigation.

Bay Minette, Ala.—Hampton D. Ewing, Pres., of the Bay Minette Land Co., is interested, it is stated, in the erection of an electric lighting plant.

+Trenton, Tenn.—The city has awarded a contract for the construction of an electric-light plant and water-works system to the ALLEN ENGINEERING CO., of Memphis, Tenn,. at $17,233. R. C. Houston, 1634 Exchange Bldg., Memphis, is Engr. Noted Sept. 21.

Barbourville, Ky.—The Bon Jellico Coal Co., which has been recently organized, has leased 1,300 acres of coal lands in Whitley County. A complete electrical equipment to operate the mines and all shops and machines will be installed, and a 3-mile spur railroad will be built, it is stated. Arthur Groves is Pres., and E. B. Taylor, of Williamsburg, is Mgr.

+Cleveland, Ohio.—The city has awarded a contract for the construction of the addition to the municipal electric-light plant to D. W. McGRATH, at $5,294. H. S. Holton is Dir. Pub. Service.

East Liverpool, Ohio.—A site has been purchased by the John Henry Miller Gas Producing Co., of Woodlawn, Pa., for the purpose of erecting a plant.

Medina, Ohio.—The Medina Gas & Fuel Co. has applied to the commission to issue $250,000 bonds to construct a pipe line from the Medina-Ashland fields to Kenton, 60 miles, and to drill new wells. E. W. Hanley, of Dayton, Ohio, is Treas.

Woodsdale (Trenton post-office), **Ohio.**—A site has been purchased at Woodsdale by the Russell Co., Conover Bldg., Woodsdale, for the purpose of building a power station.

Fremont, Ohio.—Bids were opened Nov. 21 and the Court enjoined the awarding of the new contract for lighting.

Auburn, Ind.—A power plant will be erected, it is reported, and Mahurins & Mahurins, Archs., of Fort Wayne, Ind., have been retained by the County Commissioners to prepare plans and specifications.

Otterbein, Ind.—The Otterbein Light & Power Co. contemplates the construction of an electric power plant to furnish electricity for lamps, heat and motors. Among those interested are Lewis Leaming, R. H. Holt and R. W. Pearce.

+Muskegon, Mich.—The City Council has let a contract to the GRAND RAPIDS-MUSKEGON POWER CO. to furnish the city with light. The municipal lighting plant will not be built at present.

+Lockport, Ill.—A contract has been awarded to the KLEMP SIMPSON CO., of Chicago, Ill., at $4,140, for the installation of operating machinery for lock gates of the canal in connection with the power house near Lockport.

+Waukegan, Ill.—The North Shore Consolidated Gas Co. has awarded a contract to the SEMET-SOLVAY CO., of Syracuse, N. Y., for the construction of a gas plant. The estimated cost of the plant is $100,000.

+Milwaukee, Wis.—A contract has been awarded to the WESTINGHOUSE ELECTRIC CO., of Pittsburgh, Pa., for a condenser for the power plant for the refuse incinerator and for one turbine and auxiliary apparatus to ALLIS-CHALMERS CO., Milwaukee, Wis. The total cost is $15,092.

present.

+Brillion, Wis.—A contract has been awarded by the Brillion Iron Works, of Brillion, for the installation of an electric-light and power system to the ACKER ELECTRICAL CO., of Sheboygan, Wis. One generator and oil engine, one 20-HP. motor and five 5-HP. motors and switchboard will be installed, and tungsten lamps will be used.

Galva, Iowa.—Bids will be received by the Town Clerk, until Dec. 15, for the erection of a building and equipment for an electric-light system. The Electric Engineering Co., of Sioux City, has charge of the engineering work. I. E. Baumgardner is Town Clk.

Lamoni, Iowa.—Reports state that an electrolier lighting system is being considered by the City Council.

Ottumwa, Iowa.—The Western Utilities Co. has purchased the holdings of the Ottumwa Gas Light, Heat & Power Co., and will issue bonds of $750,000 for extensions and improvements.

+Minneapolis, Minn.—The City Council has awarded a contract to the MINNEAPOLIS GENERAL ELECTRIC CO. to erect and maintain 137 ornamental lamps.

Leavenworth, Kan.—Bids will be received until Dec. 22, at the office of the Supervising Architect, Treasury Department, Washington, D. C., for installation of conduit and wiring system, lighting fixtures, etc., to be installed in the United States post-office and custom house in Leavenworth. Plans and specifications may be obtained at Washington, D. C., or at the office of the custodian at Leavenworth. James Knox Taylor is Superv. Arch.

+Omaha, Neb.—A contract for lighting fixtures in the new court house has been awarded to HAYDEN BROS., at $25,000. The other bidders were the Johnston Electric Co., David J. Braun Co., of Chicago, and the Beardslee Chandelier Mfg. Co., of Chicago. All these bid $25,000 each.

Omaha, Neb.—See item under Electric Railways.

Norfolk, Neb.—An electric-light plant and water-works system is contemplated.

Woonsocket, S. Dak.—The Shuler Electric Co. has been granted a franchise by the City Council to construct and operate an electric-light plant. Noted Nov. 16.

Murfreesboro, Ark.—An electric-light plant is proposed. E. L. Timmons, of Shawnee, Okla., is interested.

Aransas Pass, Tex.—See item under Water Supply—Irrigation.

Coleman, Tex.—F. W. Turner and associates have taken preliminary steps to laying a natural gas pipe line from the Trickham gas field to Coleman, Brownwood and other towns, and to install gas-distributing systems in these places. The gas well at Trickham has a flow of about 2,500,000 cu. ft. a day, and a second well will be put down to afford a sufficient supply of gas for the new project.

Hamlin, Tex.—The Hamlin Electric Light & Power Co. has recently been incorporated, and will erect a plant. Cost is estimated at $10,000.

Deming, N. Mex.—H. B. Johnson and R. H. Boulders, of Silver City, N. Mex., are interested in the installation of a large hydroelectric plant on the east fork of Gila River, 65 miles north of here, and the construction of power-transmission lines to Deming and through the Mimbres Valley to supply irrigating pumping plants and other industries with power. The first development dam will be a 15-ft. timber dam, estimated to cost from $300,000 to $350,000. The power-diversion dam will be a 30-ft. dam where the flow is 100 sec.-ft., without any storage. The whole project will require about $1,200,000.

Wallace, Idaho.—An electric power plant is being considered by he interests connected with the Iron Mountain Mine, near Wallace. An expenditure of about $100,000 will be made, it is reported.

Wendell, Idaho.—A new company has been formed by capitalists from Salt Lake City, Utah, for the purpose of building a power plant on the Snake River in Idaho, near Thousand Springs, with a capacity of 5,000 H.P. John Dern is Pres. Lafayette Hanchett, W. W. Armstrong and W. V. Rice are interested. An inspection is being made, and work will probably be started within 30 days. The company has offices at Salt Lake City, Utah, and Wendell, Idaho.

Fallon, Nev.—Plans and specifications for the erection of an electric-light plant have been accepted by the City Council, and the sale of $15,000 bonds for the construction has been authorized.

Centralia, Wash.—The installation of certain new equipment, including a transformer, will be purchased.

Ephrata, Wash.—The installation of an electric-light plant is proposed by the Ephrata Eectric Co., which has recently been formed. The plant will probably cost $10,000.

Seattle, Wash.—Bids will be received by C. B. Bagley, Sec. of the Bd. Pub. Wks., until 10 a. m., Dec. 12, for one motor generator set, consisting of 2-phase, 60-cycle, 7,500-volt, alternating current, synchronous motor, and a 300-600-volt 500-KW. 3-wire direct-current starting motor and exciter, etc. Delivery f. o. b. King County, Wash.

Duvall, Wash.—See item under Water Supply—Irrigation.

+Woodville, Ore.—A contract has been awarded to the ROGUE RIVER ELECTRIC CO., of Medford, Ore., to install an electric-light plant here.

Albany, Ore.—Col. W. H. McGoldrick has been recently granted a city franchise for gas, and also a county franchise, which will be in conjunction with the city franchise, and will begin operation within a few weeks.

Patton, Cal.—Bids will be received at the office of the State Engineer until noon Dec. 16 for a power house complete to be erected at the State Hospital. Nathaniel Ellery, Sacramento, is State Engr.

Glendale, Cal.—The city trustees have transferred the holdings of the Glendale Light & Power Co. to L. C. Brand, at $55,000. Improvements and extensions will be made.

Oroville, Cal.—Tentative plans have been made by the Oro Water, Light & Power Co., for extensive improvements to be made at its plant. An expenditure of several thousand dollars will be made, it is stated.

B. S. Pederson, Coast Mgr. for the Western Gas Construction Co., is making an inspection of the plant.

Redding, Cal.—The Northern California Power Co. has filed a deed from the Central Pacific Ry. Co. for necessary land on which to construct an electric power plant in the Big Bend of Pit River. The deed also transfers to the power company a right of way through certain railroad lands for the purpose of building ditches, tunnels and pole lines in connection with its power development project.

Visalia, Cal.—The Board of Supervisors has passed an ordinance granting a 50-year franchise to the Pacific Light & Power Corporation, to build and operate an electric tower and pole and wire system over certain highways in Tulare County. Avon K. Cobourn is Clerk.

Harrison, Ont.—An electric system of street-lighting is proposed. A vote will probably be taken.

Innisfail, Alta.—The installation of a municipal electric-light plant is proposed.

Kamloops, B. C.—Dutcher & Maxwell have made an estimate for the City Council of the proposed hydroelectric power plant to be erected on the Barrier River. About 2,000 HP. can be developed at a cost of $190,000.

+Vancouver, B. C.—A contract has been awarded GRANT, SMITH & CO., Vancouver, at $500,000, for the construction of a water-power plant, on Punledge River, by the Canadian Collieries of Dunsmuir. About 12,000 HP. will be developed.

Virden, Man.—Bids are being asked by the Mayor for the installation and operation of an electric light and power plant. J. F. C. Menlove is Secy.-Treas.

Monterey, Mex.—Official announcement has been made that the Mexican Midland Light & Power Co., Ltd., of Montreal, Canada, which was recently chartered, has acquired the concessions and other holdings of the Mexican Hydroelectric Co., of Mexico City, Mex. The plans of the Mexican Hydroelectric Co. for the installation of hydroelectric plants on the Naranio River in the state of San Luis Potosi, and the Rio Blanco River in the states of Nuevo Leon and Tamaulipas, will be carried out by the Mexican Midland Light & Power Co., Ltd. Besides the available water power that is owned by the company, its concession from the federal government grants permission to build a system of electric railways and several hundred miles of transmission lines.

BRIDGES.

(*+Denotes a contract awarded.*)

Woonsocket, R. I.—Preliminary plans have been prepared for a steel and concrete bridge to be erected on Bernon St. Estimated cost, $36,000. Frank H. Mills is City Engr.

Naugatuck, Conn.—We are officially advised that plans are being prepared for a memorial bridge to be erected in Naugatuck. Howard B. Tuttle is Chn. of the Citizens' Com.

East Haddam, Conn.—Surveys are being made for a 900-ft. draw bridge to be erected over the Connecticut River by the East Haddam and Haddar Bridge Commission. Appropriaion, $225,000. Edward W. Bush, East Haddam, is Ch. Engr. of Comn.

***Fulton, N. Y.**—Bids will be received by the Board of Public Works until 8 p. m., Dec. 18, for the construction of a concrete steel bridge across the Oswego River at Broadway in the City of Fulton, according to the plans and specifications prepared by the Concrete Steel Engineering Co., Park Row Bldg., New York. Plans are on file in the office of the City Engineer of Fulton, and specifications may be obtained from the City Engineer or the Concrete Steel Engineering Co. Advertised Nov. 23.

Ithaca, N. Y.—The lowest bids received by Arthur S. Cole, County Supt. of Good Roads, for constructing a bridge over Salmon Creek at Myers, were as follows: Weedsport Construction Co., Weedsport, and the Seneca Engineering Co., Montour Falls, $4,893; Groton Bridge Co., Groton, $4,994.

New Brunswick, N. J.—Bids will be received by the Board of Freeholders until 2 p. m., Dec. 18, for erecting a drawbridge over Cheesequake Creek.

Waynesburg, Pa.—Bids will be received by the Commissioners of Greene County until Dec. 18, for constructing a reinforced-concrete bridge over Meadow Run in Dunkard Township. D. P. Johnson is Chn. of Comrs.

Hokendauqua, Pa.—Bids will be received by J. S. Troxell, Clk. of Lehigh County Comrs. at Allentown, until 10.30 a. m., Dec. 15, for repairing the superstructure of the bridge over the Lehigh River at Hokendauqua.

Pawling, Pa.—The construction of a reinforced-concrete bridge to replace the old structure that spans the Schuylkill River at Pawling, is being considered by the County Commissioners. The estimated cost is $30,000.

Baltimore, Md.—James H. Preston, Mayor, has received a report estimating the cost of a concrete bridge over Spring Garden's at Light St., to Brooklyn, at $600,000 to $1,000,000. Oscar F. Lacky is Harbor Engr.

Indian Head, Md.—Bids were received Dec. 2 by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for tide bridge and repairs to wharf at the Naval Proving Ground at Indian Head, as follows: (1) Bridge and repairs complete, including hydraulic operating equipment; (2) same excluding hydraulic operating equipment; (3) new price per 1,000 ft. B. M., new floor planking; (4) net price for each additional pile: Sanford & Brooks, Inc., Baltimore, Md., (1) $14,500, (2) $12,900, (3) $65, (4) $11; Clark & Winston Co., Washington, D. C., (1) $14,384, (2) $12,784, (3) $50, (4) $5. Noted Nov. 9.

Baton Rouge, La.—Bids will be received by F. A. Woods, Secy. Police Jury of East Baton Rouge at Baton Rouge, until 11 a. m., Dec. 12, for the construction of a reinforced-concrete and steel bridge over Comite River on Greenwell Springs Road.

Miamisburg, Ohio.—Bids will be received by the Board of County Commissioners at Dayton, until Dec. 21, for the construction of a hand lift bridge over the Miami and Erie Canal at Smith St.

Detroit, Mich.—The plans of the Michigan Central R. R. Co. for the construction of a steel and concrete bridge over the tracks on Sandwich St. have been approved by the Board of Public Works.

Council Bluffs, Iowa.—The construction of a concrete bridge across Indian Creek at Main St. is contemplated by the city. E. F. Stimson is City Engr.

St. Paul, Minn.—The Subcommittee on Bridges, S. A. Farnsworth, Chn., has recommended appropriations as follows: General repair of bridges, $20,000; Smith Ave. bridge, $1,000; new flooring, sidewalk, guard rail and paving of Robert St. bridge, $25,000, and Rice St. bridge over the Great Northern tracks, $1,200.

David City, Neb.—The Supervisors of Colfax and Butler Counties are considering the construction of a bridge to connect the two counties. Estimated cost, $45,000.

Kalispell, Mont.—Bids will be received by the Board of Commissioners of Flathead County at Kalispell, until Dec. 16, for constructing three steel bridges.

Warrensburg, Mo.—Bids will be received by the Board of Commissioners of Johnson County until Dec. 12 for constructing 29 steel bridges.

Houston, Tex.—Bids for constructing two reinforced-concrete bridges over White Oak Bayou were received Nov. 20 by Dan C. Smith, City Controller, as follows: Pearson & Co., large bridge, $21,486; small bridge, $8,114; Black-Laird Construction Co., $17,000, $6,800; Carmichael Construction Co., $18,000, $6,880. All bids were rejected. New bids will be received until Dec. 18. Noted Oct. 5.

+Mountain Home, Idaho.—The contract for constructing a 3-span bridge, 517 ft. long, over Snake River at Loveridge Ferry, has been awarded to the MINNEAPOLIS STEEL & MACHINERY CO., Minneapolis, Minn., at $22,574. Noted Nov. 9.

Woodland, Wash.—Bowerman & McCloy, Central Bldg., Seattle, have been commissioned by the State Board of Highway Commissioners to prepare plans for the construction of a steel bridge across the north fork of the Lewis River near Woodland. Estimated cost, $60,000. Noted Nov. 30.

Seattle, Wash.—Bids will be received by the Board of Commissioners of Franklin County until 2 p. m., Dec. 19, for constructing the Franklin bridge.

Guadaloupe, Cal.—A bridge estimated to cost $55,000 will be erected over the Santa Maria River near Guadalupe. The cost will be borne by Santa Barbara and Ventura Counties. Bids will me received until Feb. 5.

Pasadena, Cal.—The City Council has ordered the advertisement for bids for the erection of the concrete bridge over the Arroyo Seco. Plans for the bridge, drawn by Waddell & Harrington, Kansas City, Mo., have been approved. The bridge, which will be paid for jointly by the city and the county, will be of reinforced concrete throughout. It will be about 1,500 ft. in length, starting at Colorado St. and Grand Ave. on a radius of 916 ft. and having a 4% grade to the center. The center roadway will be 28 ft. wide and will be flanked on each side by 5-ft. sidewalks. Twelve spans are provided for in the plans, the center span being 200 ft. long. At its highest point the bridge will be 150 ft. above the bed of the Arroyo. Estimated cost, $200,000.

Wilmington, Cal.—Bids for constructing a pile trestle bridge at East Seventh St., between M and Schley Sts., were received by the Board of Public Works of Los Angeles as follows: MERCEREAU BRIDGE & CONSTRUCTION CO., Pacific Electric Bldg., Los Angeles, $7,490 (awarded contract), Harold H. Scott, $7,661; Los Angeles Bridge & Construction Co., $7,857; Chas. W. Corbaley, $7,684; Russell-Greene-Foell Co., $8,849; Robert Beyrle, $8,548; G. M. Atkins, $7,600, and Edgar T. Wheeler, $7,650. The bridge will consist of 40 3-pile bents and will be 1,000 ft. long and 20 ft. wide. Noted Nov. 9.

Winnipeg, Man.—Bids will be received by the Mayor and Board of Aldermen until 11 a. m., Dec. 28, for constructing the superstructure of the drawbridge to be erected at Osborne St. Specifications are on file at the office of Engineering News.

BUILDINGS.

(**Denotes that this work is advertised in Engineering News.*)

Boston, Mass.—Bids will be received until Dec. 14 by the School House Department for erecting and completing addition to the Roxbury High School, 110 Boylston St.

+Boston, Mass. — The contract for the theatre at 648 Washington St. and running through to Harrison Ave., has been awarded to the GEORGE A. FULLER CO., 137 State St., Boston. Estimated cost, $100,000; Charles H. Blackall, 20 Beacon St., Boston, is Arch.

Bids will soon be asked for the office building to be built corner of Boylston and Church Sts. To be of fireproof construction, six stories. H. Hooper, Lawrence, 55 Kilby St., has charge of the building, and J. A. Schweinfurth, 35 Congress St., is the Arch.

Clinton, Mass.—A theatre is about to be erected on High St. by Herman C. Cofman of Fitchburg.

Lowell, Mass.—An apartment block to cost $80,000 will be built for A. B. Beal.

+Manchester, Mass.—The contract for the $150,000 residence to be erected at Smith's Point for Russell C. Head, 65 Congress St., Boston, has been awarded to ROBERTS & HOARE. Contract for the mason work to GEO. S. SINNICKS, and for the stone work to MORLEY, FLATLEY & CO. Andrews, Jacques & Rantoul, 50 Congress St., are the Archs.

Melrose, Mass. — A brick theatre building is to be erected on Main, near Grove Sts. Estimated cost, $40,000.

+Wakefield, Mass.——The contract for the state armory has been awarded to the WHITON & HAYNES CO., of Boston. The cost is $50,000.

Boston, Mass.—A new building will be constructed here by St. Paul's Episcopal Congregation. The cost is about $40,000.

Bids will be received by the Schoolhouse Commissioners of Boston, until Dec. 7, for constructing an elementary school, lower grades, Roger Wolcott Dist., Willowwood St., Dorchester.

Worchester, Mass.—The Holy Cross College will construct a new college building to accommodate the increasing number of pupils. The cost is $100,000.

Hartford, Conn.—Several days ago various plans were submitted to the State Comptroller for armories in Branford, Danbury and Willimantic. The successful architects are as follows: Branford, Palmer & Townsend, Meridian, Conn.; Danbury, Duffy & Payne, New London, Conn.; Willimantic, John J. McMahon, Pearl St., Hartford, Conn. Bids for these buildings will be asked for shortly.

+New Haven, Conn.—The contract has been awarded to the FENTON-CHANLEY CO., Norwich, to erect the brick, stone and granite edifice at State and Eld Sts. for the St. Stanislaus Polish Church. Approximate cost, $75,000.

Gasport, N. Y.—The New York Central R. R. is planning the construction of a passenger station at Gasport. George Kiltnedge, Ch. Engr. New York City.

New York, N. Y.—It is reported that Arthur J. O'Keefe, Bridge Comr., has announced that plans for the $2,500,000 terminal at the Manhattan end of the Brooklyn Bridge have been completed and bids will be received in a few days. This involves the building of the subway connection between the elevated railroad tracks on the bridge and the subway station in the basement of the Municipal Building. The general scheme also includes the opening of a new thoroughfare extending from North William to William St., along the northerly side of the bridge structure.

New York, N. Y.—Plans are being prepared for the construction of a 12-story apartment house at 562 to 688 West End Ave. S. B. Klee, 200 Broadway, is interested.

Plans are being prepared by Schwartz & Gross, Archs., 347 Fifth Ave., for the construction of a 12-story apartment house. The Hennessey Realty Co., 220 Broadway, are the owners.

Plans are being completed by Cross & Cross, Archs., 527 Fifth Ave., for the construction of a 12-story apartment house at 401 to 405 Park Ave. The cost is about $400,000. The Park Avenue and Fifty-fourth Street Co., 49 Wall St., are the owners.

Plans have been completed by Schwartz & Gross, 347 Fifth Ave., for the construction of a 6-story tenement house at 36-42 Convent Ave. The Albin Construction Co., 143d St. and Convent Ave., is owner. The cost is $200,000.

New York, N. Y.—Schwartz & Gross, Archs., 347 Fifth Ave., are ready to receive bids on the structural steel work for the 12-story apartment house at 411 to 421 West 119th St. The cost is $300,000. The Jacobs Construction Co., 420 West 119th St., is the owner.

White Plains, N. Y.—The Board of Supervisors of Westchester County decided to build a 200-bed hospital for the treatment of tuberculosis. It will cost about $200,000.

Camden, N. J.—Bids will be received until Dec. 7 for erecting the 2-story brick and terra cotta Masonic Temple, 45x145 ft., at Camden. Plans by Heacock & Hokanson, Bailey Bldg., Philadelphia, Pa. Probable cost, $45,000.

+Jersey City, N. J.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded contract for the construction of a post office at Jersey City, N. J., to the HEDDEN CONSTRUCTION CO., New York City, at $446,800.

Homestead, Pa.—Bids were received as follows on Dec. 4, by James Knox Taylor, the Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a post-office at Homestead, Pa.—(a) limestone, (b) sandstone: George M. Hall Co., Homestead, Pa., (a) $82,818, (b) $83,558; Homestead Lumber Co., Homestead, Pa., (a) $65,000, (b) $67,000; John W. Emery, Philadelphia, (a) $71,686, (b) $71,380; William H. Fissell & Co., New York, (a) $68,750; Golden & Crick, Pittsburg, (a) $79,670, (b) $82,310; John G. Unkefer & Co., Minerva, Ohio, (a) $63,571, (b) $65,271; M. Yeager & Son, Danville, Ill., (a) $66,362, (b) $69,620; King Lumber Co., Charlottesville, Va., (a) $69,950, (b) $75,000; Henry Shenk Co., Pittsburg, (a) $75,774, (b) same; David T. Riffle, Pittsburg, (a) $79,515, (b) same; Thomas W. Cissell, Connellsville, Pa., (a) $67,585, (b) $67,625; James de Vault, Canton, Ohio, (a) $72,926, (b) $73,500; Barnes Bros., Logansport, Ind., (a) $65,600, (b) $66,300; Newport Contracting & Engineering Co., Newport News, Va., (a) $76,210; (b) $79,210.

Pittsburgh, Pa. — The Allegheny County Workhouse will be improved at an estimated cost of about $250,000. All the old brick cells, about 600 in number, are to be replaced with modern concrete structures and 20 cells added.

Ambridge, Pa.—Final plans have been decided upon for the construction of the proposed auditorium to be built at Charles and Maplewood Sts. by the Ambridge Auditorium Co.

Erie, Pa.—A site has been purchased between Peach and Sassafras Sts. on which a jail will be erected.

+Philadelphia, Pa.—The contract for the 9-story and basement, reinforced concrete building to be erected at 506 to 512 Race St. for A. Hortung, has been awarded to CRAMP & CO., Philadelphia. The structure will be 79x130 ft. Plans by C. P. Berger.

Pittsburgh, Pa.—Plans have been prepared by McCollum & Dowler, Archs., for the Bank of East Pittsbrugh, for a 6-story fireproof banking and office structure, to be erected in Linden Ave., East Pittsburg. Bids will be asked for next week, it is said.

Bids are being received by Charles Bickel for constructing a 3-story brick and ornamental terra cotta hotel, apartment and office building at Federal and East Robinson Sts., Northside, for R. H. Boggs. The building will contain 12 suites of living apartments and seven storerooms, and will cost about $85,000.

+Baltimore, Md.—The contract for placing the concrete piles for the foundations of a building to be erected at Baltimore for the Baltimore News has been awarded to the RAYMOND CONCRETE PILE CO., of New York and Chicago; Owens & Sisco are the Archs.

Gaffney, S. C.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until Jan. 10, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring, and interior lighting fixtures), of the U. S. post office at Gaffney, S. C. The building is one-story and basement, and has a ground area of approximately 4,200 sq. ft.; fireproof construction throughout; stone facing and tin roof. Drawings and specifications may be obtained from the Custodian of Site at Gaffney, S. C., or at the office of the Supervising Architect.

Columbus, Ga.—A hotel will be erected by a company, in which J. Ralston Cargill is interested. The cost is $250,000.

Waycross, Ga.—The plans for the combined auditorium, theater and office building for Waycross have practically been agreed upon. They call for an expenditure of from $50,000 to $60,000. The structure proposed will be controlled by a stock company. The auditorium will seat from 2,600 to 3,000 people.

Bay Minette, Ala.—Bids will be received by the Commissioner's Court until Dec. 12 for erecting a jail. Frederick Ausfeld, 1026 Bell Bldg., Montgomery, is Arch.

Jena, La.—Bids will be received by J. Wolfe Carter, Supt. Schools, until Dec. 8, for erecting a 3-story brick school. Stevens & Nelson, 1109 Hennen Bldg., New Orleans, are the Archs.

Jonesboro, Tenn.—L. R. Clark, Secy. Court House Com., writes that bids will probably be received Jan. 1 for the erection of a brick and stone court house, to cost $50,000.

Cleveland, Ohio.—Bids will be received by the Board of Education until Dec. 18 for construction of a school.

Cincinnati, Ohio.—Plans for the New Theater, Walnut St. near South Sixth, are being prepared by H. E. Kennedy.

Cleveland, Ohio.—H. S. Janes has had plans prepared by Page & Corbusier for an apartment to be erected on East 83d St. The plans call for a 3-story brick building, with stone trimmings. There are to be six suites in all.

Lima, Ohio.—Bids will be received by George E. Whitney, Secy. Bd. of Hospital Comrs., until Dec. 19, for the erection of the Lima State Hospital, for furnishing material and installing the mechanical equipment at the Lima State Hospital. F. L. Park, 1 New Hayden Bldg., Columbus, is Arch.

Mansfield, Ohio.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m. Jan. 12, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring and interior lighting fixtures), of the U. S. post office at Mansfield, Ohio. The building is to be two stories and basement with a ground area of approximately 7,000 sq. ft., with stone facing to the first floor, brick facing above, and a tile roof; the first floor only to be fireproof. Drawings and specifications may be had from the custodian of site at Mansfield, Ohio, or at the office of the Supervising Architect.

Salem, Ohio.—Bids will be received by C. C. and A. L. Thayer, Lawrence Saving & Trust Company Bldg., New Castle, Pa., until Jan. 1, for erecting a 3-story, 50x100 ft. hospital building for the Hospital Association of Salem. Probable cost, $65,000.

Bloomington, Ind.—Bids were received as follows on Nov. 29, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a U. S. post office building at Bloomington, Ind.: (a) limestone, (b) sandstone; Rogers & Kaiser, Chicago, (a) $58,333, (b) $61,433; Barnes Bros., Logansport, Ind., (a) $58,800; John G. Unkefer & Co., Minerva, Ohio, (a) $58,888; Bedford Stone & Construction Co., Indianapolis, Ind., (a) $59,600, (b) $65,000; Christ Kanzler & Son, Evansville, Ind., (a) $59,997, (b) $60,983; August Ohm, Terre Haute, Ind., (a) $60,473; R. S. Moore, Lafayette, Ind., (a) $61,556; Conners Bros. Co., Lowell, Mass., (a) $63,100; George W. Stiles Construction Co., Chicago, (a) $64,453; J. N. Fairchild, Danville, Ill., (a) $64,575, (b) $68,975; Hiram Lloyd Bldg. & Construction Co., St. Louis, Mo., (a) $64,781, (b) $66,781; King Lumber Co., Charlottesville, Va., (a) $67,000, (b) $69,900; A. M. Spreckelson, Indianapolis, Ind., (a) $71,900.

Chicago, Ill.—The Lincoln Park Board is considering the erection of a monkey house, cost $15,000, and a reptile house, cost $50,000; elephant house, cost $75,000.

Mattoon, Ill.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until Jan. 9, for the construction (including plumbing, gas piping, heating apparatus, electric conduits, wiring and lighting fixtures) of a U. S. post office at Mattoon, Ill. The building is approximately 5,000 sq. ft. of ground area; one story, basement and mezzanine. The building will be fireproof construction, except roof, and the exterior is faced with granite and stone. The roof will be of tin and tile. Drawing and specifications may be had from the Custodian of of the site at Mattoon, or at the office of the Supervising Architect.

Milwaukee, Wis.—Plans have been completed by D. H. Burnham & Co., 9 Jackson Blvd., for the construction of a $1,000,000 addition to Gimbel Brothers' store. The plans call for a 9-story building, 215 ft. on Sycamore and 200 ft. on West Water St. When completed and joined with the present building the firm will have a frontage of 200 ft. on West Water St., 200 on Sycamore St. and all built 80 ft. on Grand Ave. between West Water St. and the Milwaukee River. It is planned to build the addition of tile and white stone to match the main building. It will be connected with the present structure and will provide 160,000 sq. ft. of floor space. The floor capacity of building will, therefore, be nearly trebled.

Des Moines, Iowa.—A theatre and office building will be constructed here at Fifth and Walnut Sts. by M. Rubins. Plans are being prepared by Proudfoot, Bevil & Rowson, Des Moines. The structure will cost $150,000. A large portion of it will be devoted to a theatre which will be operated in connection with Mr. Rubin's theatres in Minneapolis and St. Paul. All the old buildings on the location will be torn down to make room for the improvement.

Des Moines, Iowa.—Miners of Iowa will construct a $150,000 labor temple.

Cedar Rapids, Iowa.—M. Ford will construct a new theatre on Second Ave. The building will be of steel construction, will seat 1,600 and will be thoroughly modern throughout.

Des Moines, Iowa.—An apartment house will be constructed by Fred. W. Weitz for the construction of a new apartment house on West 18th St., near Pleasant St. The apartment house will be a three-story structure containing six apartments of five rooms each.

St. Paul, Minn.—It is reported that the members of the Minnesota Club have decided to construct a new clubhouse on the site of the Metropolitan Hotel. Probable cost, $200,000.

Parsons, Kan.—Bids were received as follows on Dec. 2, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a U. S. post office at Parsons, Kan.: Dieter & Wenzel, Wichita, Kan., (a) $53,553, (b) $55,113; Newport News Contracting & Engineering Co., Newport News, Va., (a) $57,875, (b) $60,000; Holiady & Crouse, Greensboro, N. C., (a) $58,900, (b) $61,700; Conners Bros. Co., Lowell, Mass., (a) $56,765; W. D. Lovell, Minneapolis, Minn., (a) $59,400; Barnes Bros., Logansport, Ind., (a) $57,455, (b) $59,500; Hiram Lloyd Bldg. & Construction Co., St. Louis, Mo., (a) $59,310, (b) same; M. Yeager & Sons, Danville, Ill., (a) $55,895, (b) $58,393; George W. Stiles Construction Co., Chicago, (a) $57,733; King Lumber Co., Charlottesville, Va., (a) $66,850, (b) $68,000; J. N. Fairchild, Danville, Ill., (a) $56,842, (b) $59,434; H. M. Green, Kansas City, Mo., (a) $64,511, (b) $67,537; Muskogee Construction Co., Muskogee, Okla., (a) $53,350, (b) $54,251.

Omaha, Neb.—A 10-story office building will be constructed on the site now occupied by the Krug Theatre at 14th and Harney Sts. The Krug Corporation will finance the building.

Huron, S. Dak.—Bids were received as follows Nov. 28 by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a post-office at Huron, S. Dak.: Northern Construction Co., Milwaukee, Wis., (a) $95,833, (b) $101,333; General Construction Co., Milwaukee, Wis., (a) $96,432, (b) $98,815; Barnes Bros., Logansport, Ind., (a) $97,700, (b) $103,300; George W. Stiles Construction Co., Logansport, Ind., (a) $98,875, (b) $101,375; North-Western Construction Co., Tremont, Neb., (a) $99,000, (b) $108,000; John G. Unkefer & Co., Minerva, Ohio, (a) $99,200, (b) $104,000; Dieter & Wenzel, Wichita, Kan., (a) $99,885, (b) $103,000; W. D. Lovell, Minneapolis, Minn., (a) $99,900; Conners Bros. Co., Lowell, Mass., (a) $101,145, (b) $105,920; J. W. Miller, St. Paul, Minn., (a) $101,898; Wm. O'Neil & Son Co., Faribault, Minn., (a) $102,418; King Lumber Co., Charlottesville, Va., (a) $103,400, (b) $108,400; J. H. Wiese, South Omaha, Neb., (a) $103,642; Interstate Construction Co., Saginaw, Mich., (a) $105.975, (b) same; (a) limestone, (b) sandstone.

Bismarck, N. Dak.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until Jan. 13, for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring, and interior lighting fixtures), of the U. S. post office and court house at Bismarck, N. Dak. The building is three stories, basement, and unfinished attic, and has a ground area of approximately 6,400 sq. ft.; fireproof construction throughout except the roof; stone facing, copper cornice and gutters, tile and tin roof: Drawings and specifications may be obtained from the Custodian of site at Bismarck, N. Dak., or at the office of the Supervising Architect.

St. Louis, Mo.—A building will be erected at 314 North Sixth St. by the Adams Stamp & Seal Co. The cost will be about $50,000.

Kansas City, Mo.—Rose & Peterson, of Kansas City, Mo., have been retained to prepare plans for the Y. M. C. A. building which is to be erected here. Cost will be about $200,000.

St. Louis, Mo.—Plans for an additional building for the David Ranken Jr. School of Mechanical Trades have been approved by the Board of Trustees, bids have been received and the contract will be awarded in ten days.

+Mineral Wells, Tex.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded contract for the construction of a U. S. post office at Mineral Wells, Tex., to JOHN BARDON, Fort Worth, Tex., at $56,776.

Temple, Tex.—The First Methodist Congregation has decided to spend about $50,000 on the construction of a church. A committee has been appointed.

San Antonio, Tex.—A new college building will be erected by the San Antonio Female College. The cost will be about $200,000.

Ogden, Utah.—Browning Brothers have decided to erect a large business block on Hudson Ave. directly across from their present location. The property is owned by the Woodmansee estate and the contemplated building will have a frontage on Hudson Ave. of 100 ft.

Spokane, Wash.—The Trustee Co. and the Exchange National Bank are planning the joint erection of a 12-story building to cover the entire half block on the north side of Riverside Ave. between Howard and Wall Sts., at the alley between Riverside and Main Aves. The cost is about $1,000,000.

Seattle, Wash.—Construction work will soon start on the proposed Seattle Lodge of the Protective Order of Elks, No. 92. The building will be located at Fourth Ave. and Spring St. The cost will be about $160,000.

✚**Portland, Ore.**—The contract has been awarded to the DINWIDDIE CONSTRUCTION CO. for erecting a brick and terra cotta steel-frame building for the Journal. Reid Bros., 318 Yeon Bldg., Portland, are the Archs. Cost about $300,000.

Portland, Ore.—A 7-story reinforced concrete class A building is to be erected on Fifth and Pine Sts., to cost $250,000, by H. S. Warren & Co., of Detroit.

Corning, Cal.—The Board of Trustees of Corning Union High School Dist. have accepted the plans of Louis Stons, Arch., Oakland, for the new concrete and brick high school bldg. to be erected here, at a cost of $45,000.

Hillsborough, Cal.—Horace Pillsbury, George Cameron and Cyrus Pierce will erect country homes to cost each $250,000.

Los Angeles, Cal.—The following bids were opened by the County Board of Supervisors of Los Angeles county: For installing a heating and ventilating and ice plant, vacuum sweeping plant, etc., in the county hospital—W. D. Newell, $40,944; Thomas Haverty Co., $52,900; American Heating Co., $56,338; Blumve & Jay Co., $60,904.

Los Angeles, Cal.—The Board of Education will advertise for bids soon for the erection of the main or administration building of the Manual Arts High School group at Santa Barbara and Vermont Aves. Estimated cost is $150,000. Parkinson & Bergstrom, 1035 Security Bldg., are Archs.

✚**Los Angeles, Cal.**—S. H. BEVERFORDEN, of Kansas City, Mo., was awarded the general contract at $42,300 for the erection of the new church building to be erected at 18th and Cherry Sts. for the German Evangelical Lutheran Trinity Church. The plans are by E. E. Meinardus, 827 Higgins Bldg., Los Angeles.

Los Angeles, Cal.—A. F. Roseri has been commissioned to prepare plans for the intermediate school to be erected on Soto St. in Boyle Heights. Approxiation, $150,000. Allison & Allison are preparing plans for the high and elementary school to be erected at Wilmington. The appropriation is $45,000.

Monterey, Cal.—Plans are being prepared for a 3-story class C apartment house on Aldorado St. The cost is about $40,000. William H. Weeks is Arch.

✚**Oakland, Cal.**—The City of Oakland awarded the contract to the JUDSON MANUFACTURING CO. at $234,376 for the structural steel for the new city hall at 14th and Washington Sts.

San Francisco, Cal.—Miller & Colmesnil, Archs., are preparing plans for a 3-story and basement brick and steel apartment and store building on Fillmore St. The cost is about $175,000.

Mrs. Anna Lessing will erect a store and hotel building at Grant Ave. and Bush St. Cost about $85,000. Dutton & Co. are the Archs.

James D. Phelan will erect a residence to cost in the neighborhood of $100,000. It is to be concrete and frame construction. William Curlett & Son, Phelan Building, San Francisco, are the Archs.

Miller & Colmesnil, Archs., are preparing plans for a $300,000 hotel at Ellis and Taylor Sts., for the Realty & Rea Building Co.

✚**San Francisco, Cal.**—Marion Leventritt, care Hotel Vendome, San Jose, awarded contract to the RICKON EHRHART ENGINEERING & CONTRACTING CO., 1859 Geary St., for the construction of a 6-story class "C" brick store and apartment building, at Page and Franklin Sts. Plans by G. Albert Lansburgh, 709 Mission St. The cost is about $127,941.

✚**San Francisco, Cal.**—P. L. Wilhelm, 428 Capp St., awarded contract to A. H. WILHELM, 180 Jessie St., for the erection of a 2-story brick hotel and store building at Sutter and Grant Sts. The cost is about $45,000.

✚**Sacramento, Cal.**—A contract for the erection of the frame of the new Farmers and Mechanics Savings Bank on Eighth St. has been awarded to the RANSOME CONSTRUCTION CO., at $135,000. Fifteen subcontracts will be awarded bringing the total cost to $250,000.

✚**Pasadena, Cal.**—Bids for the construction of a group of high school buildings comprising an administration building hall of science and agriculture, domestic arts and science building, mechanics' building, physical culture building. Bids were opened here on Nov. 27, by the Board of Education; separate bids were called for—(a) for the general contract, (b) plumbing, (c) painting, (d) electric work, (e) heating and ventilating, (f) program clocks. The bids received were as follows: W. C. CROWELL, Chamber of Commerce Bldg.—(1) for the administration bldg., $158,000, should 16 rooms be added add $21,000; (2) for science bldg., $47,500; (3) for domestic science bldg., $44,200; (4) for mechanics' bldg., $31,000; (5) for physical training bldg., $14,900. Total, $296,500. J. A. Harmon—(1) $172,134, for 16 additional rooms add $14,225; (2) $49,823, (3) $47,200, (4) $31,700, (5) $13,138 Total, $313,985. Mathew Slavin—(1) $177,000, for 16 rooms, etc., $21,000; (2) $48,400, (3) $44,400, (4) $30,324, (5) $19,350. Total, $319,474. F. F. Atkinson—(1) $181,413, for 16 rooms, etc., $13,800; (2) $50,163; (3) $44,000, (4) $32,410, (5) $14,131. Total, $323,117. Alta Plaining Mill Co.—(1) $183,329, for 16 rooms, $20,603; (2) $56,209, (3) $53,037, (4) $33,173, (5) $13,500. Total, $339,248. Los Angeles Plaining Mill Co.—(1) $206,700, for 16 rooms, $25,400; (2) $64,400, (3) $57,100, (4) $43,400, (5) $20,900. Total, $392,500. Plumbing: Crellar & Seaman—(1) total bid, $26,873, (2) if science building is omitted deduct $3,767, (3) if domestic science building is omitted deduct $5,347, (4) if mechanics' building, etc., $3,145, (5) if physical building, etc., $5,581. Munger & Munger—(1) total bid, $26,748. W. D. Newell—Total bid, $28,341. E. O. Nay Co.—Total bid, $28,650. Heating and ventilating: E. O. Nay Co., Pasadena.—Total bid, $20,721. Machinery and Electrical Co.—$22,314. Munger & Munger—$27,440. The contracts were awarded as follows: General contract to W. C. CROWELL, Pasadena, at $306,500. Plumbing to MUNGER & MUNGER, Pasadena, at $27,448. Heating and ventilating to the E. O. NAY CO., Pasadena, at $20,721. Electric wiring awarded to the NEWBERRY-BENHEIM CO., Los Angeles, at $20,569. Painting, awarded to the M. O. LANGARD CO., Pasadena, at $20,104.

Santa Barbara, Cal.—A site 100x178 ft. has been purchased on State St., between Micheltorena and Arellaga Sts., by the Trinity parish, and the construction of a $40,000 church edifice will begin in the near future.

San Diego, Cal.—It is stated on good authority that the plant of the Omaha Tank Manufacturing Co. will be moved here at once. Three buildings will be erected, each 66x150 ft., between 26th and 22d Sts. The manufacturing of wooden and steel tanks for all classes of service will be carried on.

Hamilton, Ont.—The congregation of St. Giles' Presbyterian Church decided tonight to build a new church at the corner of Holton Ave. and Main St., to cost $50,000. William Lees, Jr., is Chn. of the Board of Mgrs.

Juneau, Alaska.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until March 29. for the construction of the executive mansion, library and museum, at Juneau, Alaska. The building is two stories, attic and basement, approximately 60 by 57 ft. in size, of non-fireproof construction throughout. The exterior walls are faced with brick to the first story window sills and above this line with cement plaster. The roof is covered with wood shingles. Drawings and specifications may be obtained after Dec. 5, from the Custodian of the site at Juneau, Alaska, or at the office of the Supervising Architect.

WATER SUPPLY—IRRIGATION.

(✚*Denotes a contract awarded.*)

✚**Boston, Mass.**—The contract for laying 2,500 ft. of 8 and 10-in. water pipe in various streets in the city has been awarded by the Department of Public Works to LOUIS BALBONI. Louis K. Rourke is Comr.

Peabody, Mass.—The town has petitioned the Legislature for permission to extend its water system by taking water from Boston Brook, Fish Brook and from the Ipswich River. S. S. Littlefield is Chn. Comrs. Pub. Wks.

East Bridgewater, Mass.—The town has voted to extend the watermains along Walnut and Central Sts.

New York, N. Y.—Bids will be received until 3 p. m., Dec. 14, by the Park Board, Dept. of Parks, Arsenal Bldg., Fifth Ave and 64th St, Boro. Manhattan, for furnishing and laying watermains and appurtenances in various places as required in Central Park, Boro. Manhattan; and for a water supply for the new comfort station west of the old reservoir in Central Park.

Harrisburg, Pa.—The State Water Supply Commission authorized the city Nov. 29 to construct a dam about 5 ft. in height in the Susquehanna River as a step to better sanitary conditions. The dam was authorized by a popular loan of $65,000 ratified at the election in February, 1902, but has not been actively urged except in the last few years. When constructed the dam will cover mouths of existing sewers and numerous small islands in the stream in front of the city.

Washington, D. C.—The following bids were received by the Commissioners of the District of Columbia on Nov. 27 for furnishing about 1,207 gross tons of 8-in. c.-i. water pipe: Glamorgan Pipe & Foundry Co., Lynchburg, Va., $23.80 per ton; Camden Iron Works, Camden, N. J., $25.09; Standard Cast Iron & Foundry Co., Bristol, Pa., $23.94; John Fox & Co., New York, $25.70; Donaldson Iron Co., Emaus, Pa., $25.69; U. S. Cast Iron Pipe & Foundry Co., Philadelphia, Pa., $23.18; Warren Foundry & Machine Co., New York, $27.75; Lynchburg Foundry Co., Lynchburg, Va., $23.

Washington, D. C.—The District Commissioners are considering the construction of a pumping plant on Minnesota Ave., near 16th St. S. E. Estmated cost, about $10,000.

Chase City, Va.—The city is considering the installation of a water-works and sewer system. Estimated cost, about $60,000.

Dayton, Va.—The citizens have voted in favor of issuing bonds for the installation of a water-works system.

Middlebourne, W. Va.—The Middlebourne Water Co. has been incorporated to build and operate a water-works system. S. G. Pyle, Middlebourne, is interested.

Kingstree, S. C.—Bids will be received until 4 p. m., Dec. 20, by Leroy Lee, Chn., Bd. Pub. Wks., for about four miles of c.-i. pipe, eight tons of specials, 46 fire hydrants, valves, valve boxes, etc.; a brick pumping station, steam boilers, general service pumps, steel tank and tower, brick reservoir and deep wells. Plans, specifications, proposal sheets, etc., are on file at the office of M. H. Jacobs, Town Clk. J. Newton is Consult. Engr., Florence, S. C.

Cuthbert, Ga.—The City Council has sold bonds for the installation of a water-works system and an electric-light plant.

✚**Bronwood, Ga.**—We are officially advised that the town has awarded the contract to the J. B. McGRARY CO., Atlanta, Ga., for the construction of the water-works system, at $9,500. Noted Nov. 30.

Washington, Ga.—Bids will be received until Dec. 20 by the city for additions to the water-works system. Boyce Ficklen, Jr., is City Clk. Westinghouse, Church, Kerr & Co. are Engrs., New York.

Brooksville, Fla.—The city has granted a franchise to J. T. Fuller, Umatilla, Fla., to construct a water-works system and an electric-light plant. Estimated cost, $100,000.

Tampa, Fla.—The Bay Shore Development Co. will construct a water-works system here. H. G. Nickerson is Pres. and Treas.

Birmingham, Ala.—The Shades Cliff Land Co., 2014 First Ave., Birmingham, is planning the installation of a water-works system at Shades Mountain. Robert L. Totten, Birmingham, is Engr.

Rayville, La.—W. H. Wright has been retained to prepare plans for the construction of water-works, a sewer system and an electric light plant.

✚**Union City, Tenn.**—The contract for constructing water-works has been awarded by the city to CRAIG & FISHER, Covington, Tenn., at about $18,000.

Cowan, Tenn.—The city is considering the installation of a water-works system.

✚***Obion, Tenn.**—The contract has been awarded to CRAIG & FISHER, Covington, Tenn., by the Board of Aldermen for the construction of the water-works system at $18,000. Bids were opened Nov. 21. C. Jenks, Union City, Tenn., is Engr.

✚**Trenton, Tenn.**—The contract has been awarded to the ALLEN ENGINEERING CO., Exchange Bldg., Memphis, Tenn., by the Board of Aldermen for the construction of water-works improvement and an electric-light plant. Bids were opened Nov. 17. R. C. Huston, Exchange Bldg., Memphis, is Engr.

Corbin, Ky.—The city has voted bonds for he construction of a water-works system.

Frankfort, Ky.—The City Council will soon ask for bids for the installation of a filter plant. Estimated cost, $60,000. W. Longmoor is Clk.

Louisville, Ky.—Bids will be received until Dec. 8 by the Board of Public Works for installing fire hydrants in various streets. R. G. McGrath is Secy.

✚**Sebring, Ohio.**—The contract for new pumping machinery for the Sebring Water Co., we are officially advised, has been awarded to the HARRIS PUMP & SUPPLY CO., Pittsburgh, Pa. Chester & Fleming, Union Bank Bldg., Pittsburgh, are Consult. Engrs.

Euclid, Ohio.—Bids will be received until noon, Jan. 8, by F. H. Shoaff, Village Clk., for laying 6 and 8-in. watermains in a portion of Lake Rd., Clarewood St., Canterbury Ave., Vineland Rd., and Rollin St. Plans, etc., may be seen at the Town Hall or at the office of the F. A. Pease Engineering Co., Williamson Bldg., Cleveland, Ohio.

Baraga, Mich.—The city is considering the installation of a municipal water-works system.

Centralia, Ill.—Bids have been received as follows by the city for extending the water mains to the southern limits of the city: Willard Bros., $5,245; Fowler Bros., $6,384; Hall & Co., $5,413.

✚**Mounds, Ill.**—The contract for constructing water-works has been awarded by the Town Council to O'SHEA & HOGAN, Cairo, Ill., at $14,580. Noted Nov. 9.

Amboy, Ill.—J. M. Egan, Jr., City Engr., is preparing plans, specifications, estimates, etc., for the extension of the water system to the West Side, in order to give adequate fire protection to the entire city and also for replacing the water tower reservoir.

Normal, Ill.—We are officially advised that W. H. McLean, of the American Well Works, Chicago, Ill., has been instructed by the Council to prepare plans and specifications for the reconstruction of pumping equipment, to cost $15,000.

Fairfield, Ill.—The cost of the proposed water-works system here has been estimated at $50,000. The Fuller-Coult Co. is Engr., Chemical Bldg., St. Louis, Mo.

Rock Island, Ill.—The Board of Local Improvements has decided to lay a 36-in. water main from First to Fifth Aves., in 20th St., and 24-in. water mains to Seventh Ave.

Tampico, Ill.—Arthur M. Morgan, Hydraulic, Engr., 160 West Jackson Boulevard, Chicago, Ill., has been retained by the Village Board to prepare plans and specifications for the installation of a water-works system. Estimated cost, $10,000.

Cochrane, Wis.—The town has voted in favor of installing a water-works system.

Marinette, Wis.—The Council is considering the purchase of the local water-works system, with a view to extensions and improvements.

✚**Boone, Iowa.**—The City Council has awarded the contract for the construction of water mains in Boone, Carroll and Fremont Sts. to ANDREW G. ANDERSON, at $1.08½ per ft.

Ada, Minn.—The citizens have voted in favor of issuing $5.000 of bonds for the extension of the water mains.

St. Paul, Minn.—Oscar Claussen, City Engr., is preparing plans for an addition to the West Side pumping station. It is proposed to install an additional pump, boiler and to lower the pumps to give extra pressure.

***Pratt, Kan.**—See item under Miscellaneous contracts—Fish Hatchery, Pratt, Kan.

Benson, Neb.—Edward A. Steiger, City Clk., will receive bids until 8 p. m., Dec. 14, for the construction of a brick addition to the pump-house at the water-works.

✚**Waubay, S. Dak.**—The contract for installing machinery, constructing and laying water-mains, has been awarded to the WAUBAY MOTOR SALES CO. by the town.

Almont, N. Dak.—Plans are being prepared for the erection of an irrigation reservoir dam here. T. R. St. Akinson is State Engr., Bismarck, N. Dak.

✚**Hillsboro, N. Dak.**—The contract for repairs to the municipal water-works system has been awarded by the town to the GENERAL ENGINEERING CO., Fargo, N. Dak.

Devils Lake, N. Dak.—The citizens have voted in favor of municipal ownership of the water-works system.

✚**Pacific, Mo.**—We are officially advised that the contract has been awarded by the city to JAMES A. PRINGLE, Montgomery City, Mo., for the construction of the water-works system at $12,940. Bids were opened Nov. 27.

Osceola, Ark.—The city is considering the construction of a water-works system Estimated cost, $30,000.

Aransas Pass, Tex.—The city has voted $15,000 of bonds for the installation of a water-works system and an electric-light plant.

Paducah, Tex.—We are officially advised that the cost of the proposed water-works system here has been estimated at $27,000. The Fountain-Shaw Engineering Co. is Engr., Dallas, Tex.

✚**San Antonio, Tex.**—The Fowler Bros. Land Co. has awarded a contract to LING & HUGHES, San Antonio, for erecting two dams across the Frio River near Fowlerton, at $75,000. The two dams will form reservoirs in which to store water sufficient to irrigate about 6,000 acres of land.

Temple, Tex.—Bids were received Nov. 18 by the Board of Water Commissioners for furnishing a horizontal, duplex, triple-expansion condensing pumping engine of a capacity of 3,000,000 gals. in 24 hrs. The contract has been awarded to ALLIS-CHALMERS CO., Milwaukee, Wis., at $12,690.

Brownwood, Tex.—The citizens have voted to issue $15,000 of bonds for extending the water-works system. A new reservoir will be constructed.

Santa Maria, Tex.—The Santa Maria Irrigation Co. has adopted plans for extending its irrigating canal.

✚**Chandler, Okla.**—Bids were opened Nov. 21 by the city for drilling a 2,500-ft. artesian well, city to furnish casing. We are officially advised that the contract was awarded to H. P. NICHOLS, Petrolia, Tex, at $4.50 per ft. for the first 1,000 ft.; 1,000 to 1,500 ft., $4.75; 1,500 to 2,000 ft., $5; 2,000 to 2,500 ft., $5.50.

Grand Junction, Colo. — Frank Schwalbach, Grand Junction, Consult. Engr., Grand Valley Irrigation Co., has prepared plans for improvements to the irrigation system, and estimated the cost as follows: Protecting wall, shear wall and floor for intake, $14,000; concrete in dam, $5,000; iron on top of dam, $3,000; excavation, $3,450 protection below dam, $3,000; coffer dam, $2,000; total, $30,450.

Montrose, Colo.—The La Terra Ditch & Reservoir Co. has been organized at Montrose, to reclaim 10,000 acres of land on Horse Fly Creek, 14 miles south of here. Two reservoirs will be constructed. The capital is $20,000. A. A. Dennison is Pres.

Wray, Colo.—The town is considering the installation of a municipal water-works system.

La Junta, Colo.—A reservoir to cost about $500,000 will be constructed here. F. T. Lewis, La Junta, is Engr.

Phoenix, Ariz.—The Salt River Valley Water Users Association, Phoenix, is asking for bids for concrete construction on the extension of the Grand Canal at its upper end. Bids are also asked for the steel work for the waste gates and for their mechanism, etc.

Fairbank, Ariz.—A reservoir and distribution system for irrigation purposes will be constructed near here. Estimated cost, $1,000,000. Dr. E. B. Perrin, Williams, Ariz., is interested.

Tucson, Ariz.—The State University, Tucson, Ariz., has purchased 100 acres of land six miles north of McNeal and will install a large pumping plant for irrigation purposes.

✚Phoenix, Ariz.—The contract has been awarded by the Water Department, to the FUEL & IRON CO., Denver, Colo., for extending the water-mains for three miles, at about $18,000.

Salmon, Idaho.—The contract will be let in the winter for the proposed water-works system. Estimated cost, about $30,000. A. C. Merritt, Salmon, is Engr.

Duvall, Wash.—The Board of County Commissioners has granted a franchise to R. W. Comegys-Duvall and others to construct a water and light system about and in the city of Duvall. Estimated cost, about $25,000. The work will include the erection of a dam, pumping station, pipe, transmission lines, etc. John F. Miller, American Bank Bldg., Seattle, Wash., is interested

Seattle, Wash.—The City Council is considering laying watermains in Latona Ave., from Woodlawn Ave. to East 85th St. R. H. Thomson is City Engr.

The State Board of Regents, Seattle, will ask for bids for a 100,000-gal. steel water tank for the University of Washington.

Ellensburg, Wash.—F. C. Kelsey, Ch. Engr. Kittitas Reclamation District, Tacoma, Wash., submitted estimates to the directors Nov. 24. The cost of the main line is estimated at $3,802,328, and to this and the allowance for branches the directors have added $500,000 to the total estimated cost, to cover laterals, rights-of-way, etc.

Gladstone, Ore.—We are officially advised that bids were received as follows Nov. 24 by the town for constructing a water-works system and pumping plant: Ambrose & Gordon, Portland, Ore., $18,933; Jeffrey & Bufton, Portland, $19,905; Montague & O'Reilley Co., Portland, $21,201; James Kennedy Construction Co., Portland, $23,557; H. E. Deering, Portland, $32,122. The itemized bid of Ambrose & Gordon follows: Excavating, earth, per cu. yd., 80 cts.; solid rock, per cu. yd., $4.50; excavating and backfilling, earth, per cu. yd., 45 cts.; gravel and boulders, per cu. yd., $2; solid rock, per cu. yd., $2.50; wire-wound wooden stave pipe, per lin. ft., 4-in., 200-ft. head, 23 cts.; 6-in., 200-ft. head, 31 cts.; 8-in., 200-ft. head, 38 cts.; 8-in., 250-ft. head, 42 cts.; 10-in., 100-ft. head, 40 cts.; 10-in., 150-ft. head, 46 cts.; 10-in., 200-ft. head, 52 cts.; 10-in., 250-ft. head, 55 cts.; special castings, per lb., 5 cts.; hydrants, each, $35; valves, each, 4-in, $10; 6-in., $16.50; 8-in., $24.50; 10-in., $35.50; valve boxes, each, $4.75; air valve, $30; 6-in. sewer pipe, per lin. ft., 36 cts.; pump-house, $250; well, $615; reservoir, $1,500. L. C. Kelsey, Selling Bldg., Portland, is Consult. Engr.

Albany, Ore.—Tentative plans have been prepared for the construction of a reinforced-concrete dam across the Molalla River for the Canby Canal Co. Esimated cost, $1,500,000.

Gold Hill, Ore.—The city has voted to issue $25,000 of bonds for the installation of a water-works system.

✚Redlands, Cal.—The Yucaipa Land & Water Co. has awarded a contract to the BAKER IRON WORKS, Los Angeles, Cal., for 21 miles of iron pipe to be delivered in March and April.

Sierra Madre, Cal—The city has voted $111,000 of bonds, $96,500 of which is to purchase the supply and distributing system of the Sierra Madre Water Co. and $15,000 for further development and extensions.

Turlock, Cal.—We are officially advised that all bids opened Nov. 20 have been rejected by the Turlock Irrigation District, Anna Sorensen, Secy., Turlock, for the construction of about 3½ miles of canal known as Lateral No. 2½. The bids follow: Ernest Green, dirt, 17½ cts.; hardpan, 80 cts.; concrete steel drops, $20 per cu. yd.; Mesmer & Rice, 23 cts., 43 cts. and $22.03; J. D. Niman, 15¾ cts., 88 cts. and $20.50; Hoskins Bros, 16½ cts., 90 cts. and $21.

✚Alturas, Cal. — The Town Trustees have awarded the contract for a pumping plant for the water system to J. A. YATES and the NEVADA ENGINEERING WORKS.

Anaheim, Cal.—The Anaheim Union Water Co. will construct reservoir No. 2and pipe lines to convey water to Hansen's Corner.

Exeter, Cal.—Bids for water-works, opened Nov. 22, have been rejected. New bids will be received until 8 p. m., Dec. 11 by the Board of Trustees. Specifications and plans can be seen at the office of Sloan & Robson, Nevada Bank Bldg., San Francisco, Cal. Noted Sept. 21 and Nov. 9.

Chicoutimi, Que.—We are officially advised that the Chicoutimi Water & Supply Co., Chicoutimi, Que., has awarded the contract for two steel penstocks to the PETROLEUM IRON WORKS CO., 50 Church St., New York. The penstocks will be 10 ft. in diameter, 400 ft. long and ⅜-in. thick. Because of the cold weather, work upon the superstructure of the plant will be suspended until spring. Plans and specifications have been prepared by H. S. Ferguson, Consult. Engr., 200 Fifth Ave., New York.

Burlington, Ont.—Bids will be received by the Water-Works Superintendent until Dec. 8, for the construction of a steel-plate pump well for water supply. Plans and specifications may be seen at the office of the Board of Commissioners, Burlington, or at the engineers' office, Toronto. Percy Dawson, Esq., is Supt.; Chipman & Power are Engrs., Toronto.

***Winnipeg, Man.**—Bids will be received until 11 a. m., Dec. 29, by the Chairman of the Board of Control for the manufacture, delivery and erection complete, of a vertical centrifugal pump, driven by an induction motor, direct connected. The maximum quantity of water to be pumped shall be 1,000,000 Imperial gallons per 24 hours. Instructions to bidders, specifications, etc., may be obtained at the office of the City Engineer, 223 James Ave., Winnipeg. M. Peterson is Secy. Bd.

Victoria, B. C.—Bids will be received by the Water Commission until 11 a. m., Dec. 15, for the construction and installation, including all work and furnishing of all materials and equipment required for the conveying and delivering of Sooke Lake water to the city mains.

Halifax, N. S.—Plans will be prepared by F. W. W. Doane, City Engr., for the construction of a reservoir, etc. Estimated cost, $85,000.

SEWERAGE.

(**Denotes that this work is advertised in Engineering News.*)

New York, N. Y.—Bids will be received by Charles B. Stover, Pres. Park Bd., until 3 p. m., Dec. 14, for constructing a pipe sewer and appurtenances from the New Comfort Station west of the Reservoir to the sewer from the Swedish School House, all in Central Park.

St. George, N. Y.—It has been voted to construct a sewer in Willow Ave. from New York Ave. to Bay St., and in Bay St. to Maple Ave.

***Johnstown, N. Y.**—Bids will be received until 7.30 p. m., Dec. 11, by the City Clerk for the construction of a 30-in. trunk sewer. Erroneously noted under Johnstown, Pa., in "Proposals" last week.

✚South Orange, N. J.—The contract for constructing 10,000 lin. ft. of 8-in. sewer, 32 manholes, five flush tanks, 200 Y specials and 500 cu. yds. of rock excavation, was awarded Nov. 20 to PASQUALE CESTONE, 77 Glenridge Ave., Montclair, at $10,022. Noted Nov. 16.

***Plainfield, N. J.**—We are officially advised that bids for constructing sanitary sewers were received Nov. 27, as follows: Chas. A. Peterson, Plainfield, N. J., $6,454; Julian M. Solomon, Jr., Philadelphia, Pa., $6,757; John W. Heller, Newark, N. J., $7,149; T. Foster Callahan, Elizabeth, N. J., $7,564; A. B. Nicholas & Co., Inc., Brooklyn, N. Y., $7,589; Alfonso Colucci, Plainfield, N. J., $7,681; Whiting-Turner Construction Co., Baltimore, Md., $7,837; Edgar & Juan, Woodbridge N. J., $8,743; Middlesex Contracting Co., Elizabeth, N. J. $8,793. Noted Nov. 16.

Pittsburgh, Pa.—Bids will be received at the office of the City Controller, until 10 a. m., Dec. 12, for constructing sewers in various streets. Plans and specifications are on exhibition in the corridor on the fourth floor of the Municipal Bldg., Pittsburgh. William A. Magee is Mayor, and Joseph G. Armstrong is Dir. Dept. Pub. Wks.

✚Carnegie, Pa.—A contract for laying 15-in. sewers on Jane and Hays Sts., and 8-in. sewers on Deane and Fountain Sts., has been awarded to SAMUEL GAMBLE, Carnegie.

***✚Ligonier, Pa.**—The contract for constructing a sewer system and a sewage pumping and disposal plant was awarded Nov. 24 to WILLIAM JONES, Carnegie, Pa., at $56,572. The other bids were: Baker & Owens Construction Co., Johnstown, $57,571; J. M. Solomon, Philadelphia, $56,631. The system will include 32,380 ft. of 6 to 15-in. vitrified pipe sewers. The pumping plant will consist of two 4 × 5-in. centrifugal pumps electrically driven and controlled, or two 250-gal. per minute sewage ejectors with air compressors and motors, and a receiving chamber, pump pit, building, etc. The purification plant will consist of sedimentation tanks, sprinkling filters, sludge bed, etc., designed to treat 200,000 gallons of sewage. Noted Nov. 16.

✚Philadelphia, Pa.—Contracts for constructing sewers were awarded Nov. 28 by Harry A. Mackey, Dir. Bd. Pub. Wks., as follows: Cobb's Creek sewer extension from Thomas to Baltimore Aves., to DAVID PEOPLES, Betz Bldg., $30,000; 57th St. extension from Lebanon to Susquehanna Ave., RYAN & REALLY, 26 South 15th St., $10,000; Frankford extension in Torresdale Ave., from Gillingham to Meadow St., DONATO DELISE, 3556 North 7th St., $40,000; Hunting Park Ave. from Sixth to Ninth Sts., JOHN T. BUCKINS, $10,000; Luzerne St. from Tenth St. to Old York Road, JOHN T. BUCKINS, $5,000; Pennypacker Creek extension from Mill St. to Frankford Ave., JOHN McMENAMY, Harrison Bldg., $30,000; Rock Run extension from Fisher's Ave. to Brookdale St., DAVID PEOPLES, $30,000. Noted Nov. 23.

Baltimore, Md.—Bids will be received by the Board of Awards at the office of the City Register, until 11 p. m., Dec. 20, for the construction of lateral sewers in district 20-A, Sanitary Contract No. 78, and for building storm-water sewers, Storm Water Contract No. 18. Specifications and plans can be obtained at office of Sewerage Commission, room American Bldg., Baltimore. Approximate quantities, sanitary contract, 34,000 lin. ft. 8 to 24-in. vitrified pipe sewer, 1,800 lin. ft. 27-in. brick and concrete or citrified pipe sewer, 31,500 lin. ft. house connections; storm water contract, 210 lin. ft. 69x36-in. rectangular drain, 6,850 lin. ft. 48 to 36-in. circular drain, 16,100 lin. ft. 24 to 15-in. circular drain, 8,500 lin. ft. inlet connections, 320 inlets, 140 manholes. Chas. England is Chn. Sewerage Com.

✚Washington, D. C.—The District Commissioners have awarded a contract to E. G. GUMMEL for the construction of the Petworth Valley outlet sewer, at $24,334. The sewer will be constructed from 14th and Varnum Sts., through the grounds of the Municipal Hospital to 13th and Upshur Sts., thence through the right of way in line of Upshur St. extension; thence in Upshur and Varnum St. and in George Ave., between Upshur and Taylor Sts. Noted Nov. 30.

Chase City, Va.—See item under Water Supply—Irrigation.

Edenton, N. C.—Bids will be received by the Board of Sewerage Commissioners and City Council, Edenton, until noon, Dec. 19, for constructing about seven miles 8 to 15-in. sanitary sewers, manholes, flush tanks, etc. Specifications may be obtained from W. J. Berryman, Secy. Plans are on file at the office of Lyon & Lipscom, Engrs., Jacksonville, Fla., and Gaffney, S. C. R. F. Tuttle is Mayor and Chn.

Kingstree, S. C.—Bids will be received by L. P. Kinder, Mayor, and the Board of Sewerage Commissioners, Kingstree, until 4 p. m., Dec. 29, for constructing a sanitary sewer system to include about four miles 12, 10 and 8-in. terra-cotta sewer pipe, flush tanks, manholes, Y-branches, and purification plant. Plans, specifications, and proposal sheets may be obtained from J. Newton Johnston, Engr., Florence, S. C.

Atlanta, Ga.—The Sewer Committee of the City Council is considering the construction of trunk sewers, to cost about $68,500. R. M. Clayton is City Engr.

Union Springs, Ala.—Wilburn Hill, Attalla, Ala., is preparing plans for a sewer system at Union Springs. Bonds for $30,000 have been voted. P. L. Cowen is City Clk. Noted Nov. 30.

Cincinnati, Ohio.—Bids will be received by the Director of Public Service, John J. Wenner, Clk., until noon, Dec. 12, for constructing main and lateral sewers and drains and appurtenances in Chickasaw St from McMillan to Warner St.

Princeton, Ind.—The City Council is preparing to ask for bids for furnishing and installing septic tanks to dispose of the sewerage of the two sanitary sewers.

Mattoon, Ill.—Bids will be received until March 1 for constructing vitrified pipe sewers. Estimated cost, $19,500. C. L. James, Mattoon, is Engr.

✚Plainfield, Ill.—Bids for constructing a sewer system have been received as follows: JOHN HEGGIE, Joliet, Ill., $22,022 (awarded contract); James Healy, Chicago, $26,879; Ottawa Construction Co., $25,826; Wm. Moran & Co., Joliet, $23,965.

Upper Alton, Ill.—The Council is considering the construction of a main trunk sewer to cost $100,000.

✚Fond du Lac, Wis.—We are officially advised that the contract for constructing a sanitary sewer in Loyd St. was awarded Nov. 28, to ROBERT BENNETT, at 41 cts. per lin. ft. for 10-in. pipe and $23 each for flush tanks. Noted Nov. 23.

Burlington, Iowa.—Bids will be received by the City Council until Dec. 7, for constructing a sanitary sewer in Kaufmann Ave. from Conler Ave. to Cain St.

✚Des Moines, Iowa.—Contracts for constructing clay-pipe sewers were awarded Nov. 22, as follows. 39th St., to J. L. HANSMAN, at 91 cts. per lin. ft.; 29th St., to GEO. M. KING, at 97½ cts. per lin. ft.

Kansas City, Mo.—The portion of the Brush Creek sewer to be constructed between Main and Holly Sts. is estimated to cost $30,000. Paul McGeehan is Engr. of Sewers. Noted Nov. 23.

✚St. Louis, Mo.—The Board of Local Improvements has awarded the contract for the construction of the McKenzie Pl. sewer district to HOEFFKEN BROS., Belleville, Mo., at $34,756.

Springfield, Mo.—Bids will be received by J. H. Langston, City Clk., until noon, Jan. 15, for a disposal plant to be constructed of reinforced concrete, with necessary devices for sanitary reduction and treatment of sewage, and for controlling and regulating distribution of sewage treated, with all necessary connections to present outlets, and to be fitted with discharge devices and pipe connection after sewage has been treated. Robert E. Lee is Mayor.

Pryor Creek, Okla.—Bids will be received until about Dec. 20, for furnishing sewer pipe. Joe Hillin is City Clk.

Wardner, Idaho.—The city is considering the construction of a sewer system to cost $40,000. T. R. Jones is City Clk.

Toppenish, Wash.—Bids will be received until 8 p. m., Dec. 18, for the construction of approximately 18,550 lin. ft. of 8 to 16-in. trunk sewer. W. H. Hassig is City Clk.

Bellingham, Wash.—Plans for the drainage of the northwestern and northeastern sections of the city have been completed by H. A. Whitney, City Engr. Estimated cost, $20,000.

Longbeach, Cal. — We are officially advised that the proposition to vote bonds for $350,000 for outfall and main sewers was defeated. E. P. Dewey is City Engr. Noted Oct. 17.

Oakland, Cal.—A resolution has been adopted by the Council directing the City Engineer to prepare plans for the main line sewer in Sewer Districts Nos. 1, 2, 3 and 4, in the annexed district, for which the city has appropriated $100,000.

Santa Maria, Cal.—Bonds for $75,000 have been voted for the construction of a sewer system and sewer farm, the latter to be established some miles from the city.

GARBAGE DISPOSAL.

(*✚Denotes a contract awarded.*)

✚Boston, Mass.—The contract for removing snow and ice in Snow District No. 4 has been awarded to JOHN T. KEOGH at 23 cts. per cu. yd. Other bidders were: J. H. McNamara, 25 cts.; A. de Stefano, 30 cts.; Joseph Sprussler, 34 cts.; C. J. Jacobs Co., 35 cts.; Coleman Bros., 39 cts.; Mark H. Lynch, 40 cts. Louis K. Rourke is Comr. Pub. Wks. Noted Nov. 30.

✚Philadelphia, Pa.—The contract for the collection and disposal of garbage for 1912 was awarded Nov. 25 by the city to the GENERAL MFG. CO., Philadelphia, at $420,000. List of bidders noted Nov. 30.

P. James Dorney, it is reported, has submitted the lowest bid to the city for the removal of snow in November and December, 1911, and for 1912, as follows: Double teams, $1; single teams, 50 cts., when snow is taken to a dump; for removal to manholes, double teams, 84 cts., and single teams 40 cts.

London, Ont.—The city is considering an issue of bonds for the installation of an incinerator.

STREETS AND ROADS.

(**Denotes that this work is advertised in Engineering News.*)

✚Boston, Mass.—The contract for constructing a macadam roadway and wall on Pequot St., Roxbury District, has been awarded to J. C. COLEMAN & SONS CO. Louis K. Rourke is Comr. Pub. Wks.

Albany, N. Y.—Bids for the improvement of public highways by state aid were received by the State Commission of Highways, Albany, N. Y., Nov. 27, as follows:

Wellsville-Hallsport, Road No. 945, Allegany County. 4.18 miles: Frank L. Cohen, Buffalo, N. Y., $53,811; Oak Duke Lumber Co., $44,480. All above engineer's estimate.

Otto-Cattaraugus, Road No. 695, Cattaraugus County. 1.21 miles: Miller & Knickenburg, Buffalo, $9,090. All above engineer's estimate.

Otto-East Otto, Part 2, Road No. 697, Cattaraugus County, 2.27 miles: Miller & Knickenburg, Buffalo, $21,670. All above engineer's estimate.

✚Poland Center-Waterloo, Road No. No. 959, Cattaraugus County, 3.86 miles: PUBLIC SERVICE CONSTRUCTION CO., $39,752 (awarded contract); Frank L. Cohen, Buffalo, $41,822; Miller & Knickenburg, Buffalo, $42,630; Monroe Roads Co., Pittsford, $44,043; John E. Johnson & Co., Buffalo, $41,814.

*Fair Haven - Sterling - Martville, Road No. 687—A. Cayuga County, .17 miles: TOWN OF STERLING, $3,124 (awarded contract).

✚Poland Center-Waterlool, Road No. 5151, Chautauqua County, 5.20 miles: Miller & Knickenburg, Buffalo, $61,994; Frank L. Cohen, Buffalo, $59,270; FALK & MENZIES, Buffalo, $53,912; (awarded contract); Thos. Mahoney, $68,516; S. T. Benson, Falconer, $62,849; Wm. McIntyre & Sons, Sharon, Pa., $68,116; Benj. Strauss, $65,850; Monroe Roads Co., Pittsford, $60,630; Jno. E. Johnson & Co., Buffalo, $58,705; Frank Foote, Nunda, $60,665; Thos. Fitzgerald & Co., $56,974; Public Service Construction Co., $57,921; Semper Bros., Watertown, $64,327; A. J. Rockwood, Rochester, $64,387.

✚Horseheads Village, Road No. 5162, Chemung County, 1.91 miles: McCHEEVEY, McGUIGAN & BAUM, Elmira, $23,225 (awarded contract); Lane Construction Co., Meriden, Conn., $23,382; Ed. T. Beck & Co., Warren, Pa., $26,619; Goughlin & Lowman, Elmira, $26,875; Glen E. Bates, ——, $25,308; Kennedy Construction Co., Albany, $23,858; Murray & Ford, Rochester, $25,439.

✚Mooers Village, Road No. 930, Clinton County, .32 miles: WELDON &

MEAD, West Plattsburg, N. Y., $3,389 (awarded contract); Spellman, Oliver Co., Chateaugay, $3,773.

✚Bovina Center-South, Road No. 951, Delaware County, 2.34 miles: Spellman, Oliver Co., Chateaugay, $27,093; Clancy & Van Alst, Long Island City, $36,500; JOHN H. GORDON, Albany, $23,394 (awarded contract); St. Regis Const. Co., Albany, $24,747; Hallock & Angle, Newburg, $25,299; Lane Construction Co., Meriden, Conn., $23,414; Joseph McCormick, East Providence, R. I., $25,522.

✚Hobart-Stamford, Road No. 952, Delaware County, 4.66 miles: John H. Gordon, Albany, $42,705; DEGRAFF & HOGEBOOM, Kingston, $41,628 (awarded contract); St. Regis Construction Co., Albany, $42,961; Clancy & Van Alst, Long Island City, $47,524; Richard Hopkins, Troy, $46,493; Herlihy Contr. Co., Glens Falls, $48,363; Hallock & Angle, Newburg, $51,368; Lane Construction Co., Meriden, Conn., $42,354; Joseph McCormick, East Providence, R. I., $47,054.

Niagara Falls-Buffalo, Part 4, Road No. 5172, Erie County, 2.92 miles: Frank L. Cohen, Buffalo, $68,832; Ed. T. Beck & Co., Warren, Pa., $67,530; Conroy & Nixford, Oneida, N. Y., $78,274; Dollard & Heeran, Albany, $66,927; Herlihy & Linn, Glens Falls, $68,173; Erie Contracting Co., $69,223; Lewis H. Gipp, Buffalo, N. Y., $66,688; Thos. Fitzgerald, $68,798; Niagara Construction Co., Buffalo, N. Y., $66,600. All bids were rejected.

✚Saranac Lake-Village-Bloomingdale Village, Road No. 929, Essex County, 1.44 miles: St. Regis Construction Co., Albany, $18,695; J. D. Moynehan & Co., Mohawk, $20,759; Wm. Brennen, Mohawk, $19,985; JOHN B. DOWER, Ballston Spa, N. Y., $17,779 (awarded contract).

✚Schroon Lake-No. Hudson, Part 1, Road No. 5179, Essex County, 6.77 miles: J. D. MOYNEHAN & CO., Mohawk, $77,015 (awarded contract); Herlihy Contracting Co., Glens Falls, $79,926; Joseph Walker, Albany, $82,764; Crow & Walsh, Albany, $77,997; James Anderson & Sons, Brushton, $94,211; John B. Dower, Ballston, $81,064.

✚North Hudson-Euba Mills, Part 1, Road No. 5181, Essex County, 3.95 miles: J. D. MOYNEHAN & CO., Mohawk, $45,007 (awarded contract); James Anderson & Sons, Brushton, $66,867.

✚Ausable Forks-Jay, Part 2, Road No. 5184, Essex County, 2.54 miles: BOYNTON & McNALLY, Keeseville, N. Y., $24,484 (awarded contract); Sherrill Engineering & Construction Co., Hudson Falls, $28,704; Spellman, Oliver Co., Chateaugay, $27,352.

✚Newcomb-Long Lake, Part 1, Road No. 5188, Essex County, 4.63 miles: SANTONONI CONTRACTING CO., Albany, $55,784 (awarded contract).

✚Malone Village-Fort Covington St., Road No. 950, Franklin County, .80 miles: Wm. Brennen, $9,989; ST. REGIS CONSTRUCTION CO., Albany, $8,396 (awarded contract).

✚Glen Cove, Road No. 953, Nassau County, .97 miles: John J. Cashman, $18,394; Olin T. Benedict, Pittsfield, Mass., $19,953; Dunbar Contracting Co., New York City, $17,968; H. J. Mullin, Jamaica, N. Y., $22,944; Wm. C. McDonald Construction Co., $17,545; R. W. Smith, $17,690; Andrews Bros., $21,406; CLANCY & VAN ALST, Long Island City, $17,203 (awarded contract); Ed. W. Underhill, $18,140.

Cairo Hamlet, Road No. 954, Greene County, .46 miles: Catskill Construction Co., Catskill, $4,658; Catskill Supply Co., Catskill, $4,599. All bids were rejected.

✚Peekskill-Fishkill, Part 4, Road No. 5149, Putnam County, 4.17 miles: Herlihy Contracting Co., Glens Falls, $52,043; Harvey B. Sproul, Inc., Peekskill, $45,594; Frank G. Fowler Construction Co., Mt. Kisco, $48,737; Suffolk Contracting Co., Huntington, $49,352; BRIDGEPORT CONSTRUCTION CO., Poughkeepsie, N. Y., $45,441 (awarded contract); John H. Gordon, Albany, $48,701; John DeMichel & Bro., $51,031; Lane Construction Co., Meriden, Conn., $51,043; C. T. Eggleston, $49,195; Wm. S. McCabe Construction Co., $50,334; Pierson Engineering and Construction Co., Bristol, $52,984; Samuel Beskin, Fishkill, $45,503; E. W. Peck, $50,006.

✚Long Clove-Haverstraw, Road No. 5165, Rockland County, 2.16 miles: Wm. P. McDonald Contracting Co., $62,540; Pierson Engineering & Contracting Co., Bristol, $62,299; Harvey B. Sproul, Peekskill, $68,645; A. W. Bohne, $57,709; E. W. Peck, $65,157; Lane Contracting Co., Meriden, Conn., $61,982; Frank G. Fowler Contracting Co., Mt. Kisco, $67,907; Jova & Kehoe, $65,272; Dunbar Contracting Co., New York, $71,177; E. T. Eggleston, $60,866; Saml Beskin, Fishkill, $59,603; John DeMichel & Bro., $90,529; BRIDGEPORT CONSTRUCTION CO., Poughkeepsie, N. Y., $54,748 (awarded contract); Wm. S. McCabe Construction Co., Poughkeepsie, N. Y., $60,801.

✚Saugerties-Catskill, Road No. 5169, Ulster County, 3.57 miles: Catskill Supply Co., Catskill, $43,095; Suffolk Contracting Co., Huntington, $47,206; Pierson Engineering & Construction Co., Bristol, Conn., $51,318; JOHN F DONOVAN, Saugerties, N. Y., $41,851 (awarded contract); Lane Contracting Co., Meriden, Conn., $45,643; Schunnemunk Contracting Co., Highland Mills, $45,025; Henry McNamee, Kingston, $46,396; Martin Murray, $51,611; Bridgeport Construction Co., $43,449; Joseph Walker, Albany, $42,926; Harvey Sproul, Peekskill, $47,053; Thomas H. Karr, Troy, $44,625; W. J. Morrissey, $54,167; Chas. P. Bower, $50,373; DeGraff & Hogeboom, Kingston, $50,952.

✚Kingston-West Hurley, Road No. 5173, Ulster County, 4.82 miles: HENRY McNAMEE, Kingston, $50,316, (awarded contract); Suffolk Contracting Co., Huntington, $54,108; Clancy & Van Alst, Long Island City, $57,653; Jos. Kalker, Albany, $55,414; Cenedella & Co., $57,928; Bridgeport Contracting Co., $53,869; Richard Hopkins, Troy, N. Y., $55,682; DeGraff & Hogeboom, Kingston, $52,536; Schunnemunk Construction Co., Highland Mills, $54,574; Harvey B. Sproul, Peekskill, $53,662; Lane Construction Co., Meriden, Conn., $51,950; Chas. P. Bower, $64,821; Samuel Beskin, Fishkill, $55,362; Cabel H. Schnead, $58,567.

✚Eddyville Bridge, Road No. 5192, Ulster County, .24 miles: Flood & Van Wirt, Hudson Falls, $12,804; David Schantag, $17,494; DeGraff & Hogeboom, Kingston, $11,576; C. A. Russe, $15,691; Suffolk Contracting Co., Huntington, $17,691; Henry McNamee, Kingston, $9,870; JOSEPH WALKER, Albany, $9,732 (awarded contract).

✚Pine Hill-Griffins Corners, Road No. 5177, Ulster & Delaware Counties, 3.64 miles: Schunnemunk Construction Co., Highland Mills, $43,655; Jos. Walker, Albany, $44,863; Suffolk Contracting Co., Huntington, $42,008; Clancy & Van Alst, Long Island City, $42,953; HENRY McNAMEE, Kingston, $41,656 (awarded contract); Harvey B. Sproul, Peekskill, $45,513· J. H. Gordon, Albany, $47,514; Cenedella & Co., $51,270; Lane Construction Co., Meriden, Conn., $46,255; R. Hopkins, Troy, $44,872; Jos. McCormick, East Providence, $46,747.

✚Wevertown-North Creek, Road No. 5185, Warren County, 6.07 miles: Amos D. Bridges & Sons, Inc., Hazardville, Conn., $86,107; James Anderson & Sons, Brushton, $82,524; Ruddy Saunders Construction Co., Troy, $77,490; Spellman Oliver Co., Chateaugay, $84,550; Herlihy Construction Co., Glens Falls, $80,466; J. W. Whalen, Whitehall, $77,724; P. F. Connelly Co., Boston, Mass., $77,762; SANTONONI CONSTRUCTION CO., Albany, $71,884 (contract awarded)

***Albany, N. Y.**—Bids for the improvement of public highways by state aid were received by the State Commission of Highways, Nov. 27, as follows:

✚Cuba-Friendship, Road No. 5174, Allegany and Catteraugus Counties, 4.65 miles: Northwestern Construction Co., Franklin, Pa., $73,960; ED. T. BECK, Warren, Pa., $70,515 (awarded contract).

✚Gowanda-Dayton, Road No. 958, Cattaraugus County, 4.27 miles: Monroe Roads Co., Pittsford, $47,083; PUBLIC SERVICE CONTRACTING CO., Buffalo, $40,788 (awarded contract); A. J. Rockwood, Rochester, $47,857.

Rutledge-Leon, Road No. 960, Part 2, Cattaraugus County, 2.80 miles: Frank L. Cohen, Buffalo, $39,617; John E. Johnson Co., Buffalo, $41,786.

✚Plattsburg-Ausable Chasm, Part 1, Road No. 5191, Clinton County, 6.89 miles: Boynton & McNally, Keeseville, $69,987; St. Regis Construction Co., Albany, $69,245; John B. Dower, Ballston, $73,782; P. F. Connelly Co., Boston, Mass., $71,792; Spellman, Oliver Co., Chateaugay, $73,892; Burns Bros. & Haley, Watertown, $79,041; Brown & Lowe, Schenectady, $80,753; Flood & Van Wirt, Hudson Falls, $83,390; Jas. Anderson & Sons, Brushton, $71,916; SHAUGHNESSY CONSTRUCTION CO., Albany, $67,088 (awarded contract); Day & McKamblay, Plattsburg, $74,021; Semper Bros., Watertown, $74,899; Jno. H. Gordon, Albany, $70,459.

✚Hales Eddy-Hancock, Road No. 5167, Delaware County, 8.64 miles: Lane Contracting Co., Meriden, Conn., $105,180; L. Hopkins, Troy, $107,457; Schunnemunk Construction Co., Highland Mills, $109,917; Thos. Fitzgerald, Fredonia, $114,962; Jos. McCormick, East Providence, R. I., $117,664; Ruddy & Saunders Construction Co., Troy, $109,238; B. D. Pierce, Jr., Co., Bridgeport, Conn., $110,637; H. B. Cooper, Deposit, $114,984; Herlihy Contracting Co., Glens Falls, $106,748; Jas. Anderson & Son, Brushton, $110,010; JOS. WALKER, Albany, $101,951 (awarded contract); P. H. Murray, Rochester, $116,011; Spellman, Oliver Co., Chateaugay, $116,338; Harvey B. Sproul, Peekskill, $109,738.

Saugerties-Catskill, Road No. 5166, Greene County, 3.87 miles: DeGraff & Hogeboom, Kingston, $52,823; B. D. Pierce, Jr., Co., Bridgeport, Conn., $49,181; Catskill Supply Co., Catskill, $47,985; Jos. Walker, Albany, $47,088; Crow & Walsh, Pittsfield, Mass., $46,957; David Schantag, $48,721; Wm. J. Morrissey, $54,244; Catskill Construction Co., Catskill, $48,098; Pierson Engineering & Construction Co., $53,244; Suffolk Contracting Co., Huntington, $52,864; Thos. H. Karr, Troy, $47,982. All bids were rejected.

✚No. Hudson-Euba Mills, Road No. 5182, Essex County, 5.33 miles: J. D. MOYNEHAN, Mohawk, $72,297 (awarded contract).

✚New Russia-Elizabethtown, Road No. 5183, Essex County, 3.70 miles: J. D. Moynehan, Mohawk, $37,481; Spellman, Oliver Co., Chateaugay, $43,295; J. & F. Murphy, Cobleskill, $47,158; Sherrill Engineering & Construction Co., Hudson Falls, $41,860; BOYNTON & McNALLY, Keeseville, $37,186 (awarded contract).

Minerva-Aiden Lair, Road No. 5186, Essex County, 6.33 miles: James Anderson & Sons, Brushton, $83,683; Santononi Construction Co., Newcomb, $82 019; Herlihy Contracting Co., Glens Falls, $92,191.

✚Aiden Lair-Newcomb, Part 1, Road No. 5187, Essex County, 5.69 miles: SANTONONI CONTRACTING CO., Newcomb, $80,904 (awarded contract).

✚Schroon Lake-No. Hudson, Part 2, Essex County, Road No. 5180, 5.39 miles: J. D. MOYNEHAN & CO., Mohawk, $68,439 (awarded contract); Herlihy Contracting Co., Glens Falls, $74,853; P. F. Connolly, Boston, Mass., $72,180.

✚Newcomb-Long Lake, Part 2, Road No. 5189, Hamilton County, 8.43 miles: SANTONONI CONTRACTING CO., Newcomb, $98,317 (awarded contract).

✚Niagara Falls-Buffalo, Part 2, Road No. 5164, Niagara County, 3.45 miles: Frank L. Cohen, Buffalo, $64,318; Herly & Lyon, Fredonia, $62,912; ERIE CONTRACTING CO., Buffalo, $55,510 (awarded contract); Service & Mackey, Buffalo, $67,512; Louis H. Gipp, Buffalo, $60,000; Public Service Contracting Co., $60,894; Dollard & Heeran, Albany, $61,404; Niagara Construction Co., Elmira, $60,172.

✚Middletown-Cuddebackville, Part 2, Road No. 313-A, Orange County, 1 mile: Hallock & Angle, Newburg, $11,675; Jova & Kehoe, Newburg, $14,657; Jackson Bros., $11,974; Suffolk Contracting Co., Huntington, $13,634; SCHUNNEMUNK CONSTRUCTION CO., Highland Mills, $11,528 (awarded contract).

✚Southwest Oswego-Fruit Valley, Road No. 5171, Oswego County, 1.95 miles: Spellman, Oliver Co., Chateaugay, $27,995; Falk & Menzies, Buffalo, $26,543; Fred. W. Begent & Co., Newport, N. Y., $27,786; SHAUGHNESSY & CO., Albany, $24,410 (awarded contract); Jos. A. Wager & Co., $28,313; Chas. O. McComb, Syracuse, $29,127; Spuyten Duyvil Construction Co., New York, $26,874; John Herrick, $27,273; Almahar Construction Co., Albany, $26,341.

✚Peekskill-Fishkill, Part 3, Road No. 5156, Putnam County, 4.35 miles: Harvey B. Sproul, Peekskill, $59,492; Frank G. Fowler, Mt. Kisco, $58,376; Frank F. McCabe, White Plains, $56,780; E. W. Peck, Stratford, Conn., $60,844; Bridgeport Construction Co., Pokeepsie, $57,739; Pierson Engineering & Construction Co., Bristol, Conn., $62,247; Jas. Garafano & Sons, Mt. Vernon, $63,532; Suffolk Contracting Co., Huntington, $60,859; JOHN DE MICHEL & BROS., Torrington, Conn., $56,633 (awarded contract); Samuel Beskin, Fishkill, $58,501.

Nassau Village, Road No. 5163, Rensselaer County, .41 miles: Bridgeport Construction Co., Pokeepsie, $7,024; Arnold & Sherrill, Albany, $6,774; B. D. Pierce, Jr., Co., Bridgeport, Conn., $6,319; DiMartino & Musso, Scranton, Pa., $8,559; County Construction Co., Troy, $6,800; George W. Holden, Albany, $6,706 Ruddy & Saunders Co., Troy, $6,947; Crowe & Walsh, Pittsfield, Mass., $5,886. All bids were rejected.

Nassau Village, Road No. 949, Rensselaer County, .29 miles: Crowe & Walsh, Pittsfield, Mass., $4,508; County Construction Co., Troy, $4,948; Bridgeport Construction Co., Pokeepsie, $4,960; DeMartino & Musso, Scranton, Pa., $6,231; George W. Holden, Albany, $4,838; Ruddy & Saunders, Troy, $5,072; B. D. Pierce, Jr., Co., Bridgeport, Conn., $4,581; Arnold & Sherrill, Albany, $5,041. All bids were rejected.

✚Knapps Corners-Nyack, Road No. 5178, Rockland County, 2.20 miles: Wm. J. Morrissey, Saratoga, $27,966; W. F. McCabe, White Plains, $24,441; Suffolk Contracting Co., Huntington, $25,050; Frank G. Fowler, Mt. Kisco, $27,918; Frank J. Gallagher, Brooklyn, N. Y., $43,854; Saml. Beskin, Fishkill, $26,341; Jova & Kehoe, Newburgh, $30,102; Hallock & Angle, Newburgh, $27,619; Olin T. Benedict, Pittsfield, Mass., $29,995; DeGraff & Hogeboom, Kingston, $27,378; E. T. Eggleston, Yonkers, $28,778; Match Brothers, N. Y. C., $32,053; Bridgeport Construction Co., Pokeepsie, $25,364; Dunbar Contracting Co., N. Y. C., $31,857; Harvey B. Sproul, Peekskill, $25,382; B. D. Pierce, Jr., Co., Pittsfield, Mass., $25,598; SCHUNNEMUNK CONSTRUCTION CO., Highland Mills, $24,405 (awarded contract); H. G. Herring & Co., Hillsdale, N. J., $28,352.

✚Ballston-Ballston Lake, Part 2, Road No. 5085, Saratoga County, 4.52 miles: Delaware Construction Co., Sidney, $49,917; Wm. J. Morrissey, Saratoga, $50,489; Spellman, Oliver Co., Chateaugay, $49,058; Conroy & Nixdorf, Oneida, $55,917; Greenfield Construction Co., Brooklyn, $46,548; Jno. H. Gordon, Albany, $46,777; W. J. Cowhig, Pokeepsie, $45,296; J. W. Whalen, Whitehall, $49,424; Jos. J. Maloy, Schenectady, $46,997; DeGraff & Hogeboom, Kingston, $44,970; Wm. G. Fox, Saratoga, $46,758; JOHN B. DOWER, Ballston, $44,835 (awarded contract); St. Regis Construction Co., Albany, $45,176; Jno. F. Shanney, Jersey City, N. J., $57,913; W. A. Burnham & Co., $50,907.

✚Montour Falls Village, Road No. 5160, Schuyler County, 1.55 miles: Murray & Ford, Elmira, $29,606; E. T. BECK CO., Warren, Pa., $27,167 (awarded contract); Kennedy Construction Co., Albany, $28,625; McCreevey, McGuigan & Baum, Elmira, $26,251; Coughlin & Lowman, Elmira, $27,653; A. J. Champan & Co., Buffalo, $35,965.

✚Sag Harbor-North Haven, Road No. 911, Suffolk County, 3.01 miles: Frank J. Gallagher, Brooklyn, $43,803; H. J. Mullen, Jamaica, $39,524; SUFFOLK CONTRACTING CO., Huntington, $33,197 (awarded contract); Dunbar Contracting Co., N. Y. C., $34,999; Clancy & Van Alst, L. I. City, $35,981; J. J. Cashman, Brooklyn, $39,939; B. D. Pierce, Jr., Co., Bridgeport, Conn., $34,397.

✚Waverly-Owego, Part 2, Tioga County, Road No. 5168, 5.34 miles: P. H. Murray, Rochester, $50,940; E. Whalen, Towanda, Pa., $45,992; T. H. Gill, Whitney Point, $58,239; T. Fitzgerald, —— Fredonia, $47,741; Jos. McCormack, East Providence, R. I., $52,186; LANE CONSTRUCTION CO., Meriden, Conn., $40,962 (awarded contract); F. P. Meckes, Long Pond, Pa., $54,028; Coughlin & Lowman, $47,743; R. Hopkins, Troy, $45,367; Aetna Engineering Co., Herkimer, $61,016; Amos D. Bridges Sons, Hazardville, Conn., $47,120.

✚Ithaca City-Trumansburg, Road No. 5190, Tompkins County, 1.6 miles: P. C. Connelly, Boston, Mass., $15,362; Gaspan & Burns, $20,600; HALLOCK & ANGLE, Newburgh, N. Y., $13,722 (awarded contract); Wm. Howard, $13,732.

✚Warrensburg-Chestertown, Part 2, Warren County, Road No. 5158, 6.50 miles: John B. Dower, Ballston, $77,640; JOS. WALKER, Albany, $72,280 (awarded contract); Hollington Co., Troy, $75,954.

New York, N. Y.—Bids will be received by Alfred E. Steers, Pres. Boro. Brooklyn, until 11 a. m., Dec. 13, for regulating and paving with second-hand granite on a sand foundation the roadway of North Henry St., from Greenpoint Ave. to Greene St., together with all work incidental thereto.

✚**Newton, N. Y.**—The contract for grading and macadamizing 2.87 miles of road in Wantage Township was awarded Nov. 24 by the Board of Freeholders, to SALMON BROS., Stanhope, N. J., at $24,748. Noted Nov. 9.

Beachhaven, N. J.—Bids will be received by the Mayor and Council of the Borough of Beachhaven until 8:30 p. m., Dec. 11, for grading and graveling Bay Ave. S. S. Andrews is Boro. Clk.

Mount Morris, Pa.—Surveys are being made on the new macadam road to be constructed from Mount Morris to Letchworth Park, passing through the village and then through the town of Portage to the High Bridge. The road will be about 17 miles long. From Mount Morris to Nunda it will run over the state road, passing the Ridge and Brooks Grove to Nunda, eleven miles, and from Nunda through Oakland to the Portage High Bridge, six miles. Bids will be asked as soon as surveys have been completed, and work will probably begin in the spring.

Pittsburgh, Pa.—Bids will be received by William A. Magee, Mayor, and Joseph G. Armstrong, Dir. Dept. Pub. Wks., at the office of the City Controller, until 10 a. m., Dec. 12 for grading, curbing and paving with brick Faust St., from Allendale to Universal Sts., and for curbing and paving with blockstone Hazelton St., from Lawton Ave. to McIntyre Ave.

Philadelphia, Pa.—Press reports state that bids for repairing roads were received Nov. 22 by the Board of Public Works, as follows: David McMahon, Mann and Chilton Aves., Philadelphia, $202,400; Edwin H. Vare, $204,999; Richard P. Bennis, $215,000; Cunningham Paving & Construction Co., $224,000; Mack Paving & Construction Co., $265,000.

✚**Philadelphia, Pa.**—The contract for regrading Lancaster Ave. has been awarded by the Department of Public Works, to THOMAS F. REILLY, at 27 cts. per sq. yd. The city's share of the contract amounts to $40,000.

✚**Wilkes-Barre, Pa.**—The contract for paving the upper section of North Main St. has been awarded to the WARNER-QUINLAN ASPHALT CO., Syracuse, N. Y., at $1.87 per sq. yd. Noted Sept. 28.

Baltimore, Md.—Joseph W. Shirley, of the Topographical Survey, City Hall Annex, has completed tentative designs for converting Green Spring Valley Road into a boulevard, 120 ft. wide, and expects to submit report to the Mayor, James H. Preston, about Jan. 1.

✚**Towson, Md.**—The contract for constructing 1.17 miles of state-aid highway along the Glencoe Road was awarded Nov. 3 by the County Highway Commission, to J. F. PARKS, Towson, at $17,810. Noted Nov. 23.

Wise, Va.—Bids will be received by the Supervisors of Wise County until Dec. 11, for placing broken sandstone on about 15 miles of newly-graded highways of the Robinson District. William E. Cocke, Norton, Va., is County Engr.

Wheeling, W. Va.—The Good Roads Committee of the Board of Trade have had preliminary plans prepared for road improvement to cost about $250,000. Harry W. McLure is Chn. of Com.

Jacksonville, Fla.—Bids will be received by the Board of Commissioners of Duval County until Dec. 27, for furnishing material and completing vitrified brick, concrete and asphalt macadam pavements on New York Ave., from a point near Yukon to the county line, and on the John Anderson highway, from Loretta to the county line. Gail L. Barnard is County Engr., and C. W. Ellis is Chn. Bd. Comrs.

✚**Jacksonville, Fla.**—The contract for improving a portion of Atlantic Boulevard has been awarded by the Board of County Commissioners to the LOGAN CONCRETE & ENGINEERING CO., at $1.33 per sq. yd. for brick pavement. Noted Nov. 9.

✚**Pensacola, Fla.**—We are officially advised that bids for street improvement were received Nov. 14, as follows: (a) brick on sand, sand joint; (b) brick on concrete, sand joint; (c) brick on sand, asphalt filler; (d) brick on concrete, asphalt filler; (e) brick on sand, grout filler; (f) brick on concrete, grout filler; (g) brick on sand, grout fill, asphalt expansion; (h) brick on concrete, grout fill, asphalt expansion; (i) sheet asphalt with binder; (j) sheet asphalt with paint coat; (k) bitulithic. (l) asphalt block; (m) cement pavement; (n) wood block, 3½-in.; (o) wood block, 3-in.; (p) straight concrete curb; (r) straight curb: Creosoted Wood Block

Paving Co., New Orleans, La., (n) $466,-200, (o) $412,200, (p) $40,600, (r) $750; Cleveland Trinidad Paving Co., Cleveland, (i) $324,000 and $352,800, (j) $304,200 and $331,200, (l) $414,000, (m) $225,000, (p) $35,960, (r) $740; Alabama Paving Co., Birmingham, Ala., (a) $279,000, (b) $356,400, (c) $318,600, (d) $396,000, (e) $297,000, (f) $374,400, (g) $300,600, (n) $378,000, (p) $40,600, (r) $700; Jamison & Hallowell, Montgomery, Ala., (i) $315,000, (j) $298,800, (l) $423,000, (m) $434,000, (n) $495,000, (o) $459,000, (p) $34,800, (r) $750; William M. Elder, Baltimore, Md., (i) $289,800, (j) $268,200, (m) $312,000, (n) $300,160, (r) $750; J. W. Gurley & Co., Mobile, Ala., (n) $489,600, (o) $453,600, (p) $40,-600, (r) $600; Eureka Construction Co., Houston, Tex., (i) $297,000, (j) $277,-200, (p) $31,320, (r) $720; R. S. BLOME & CO., Unity Bldg., Chicago, Ill., (m) $244,800, (p) $34,800, (r) $650 (awarded contract on 28,000 sq. yds. Granocrete); W. W. Hatch & Sons, Goshen, Ind., (a) $295,200, (b) $354,600, (c) $325,800, (d) $385,200, (e) $306,000, (f) $365,400, (g) $309,600, (h) $369,000, (n) $511,200, (o) $477,000, (p) $32,480, (r) $690; Roach Manigan Co., Memphis, Tenn., (i) $331,200, (j) $295,200, (p) $40,600, (r) $750; Southern Bitulithic Co., Nashville, Tenn., (i) $331,200, (j) $318,600, (k) $369,000, (p) $32,480, (r) $700; SOUTHERN PAVING CONSTRUCTION CO., Chattanooga, Tenn., (a) $261,000, (b) $333,000, (c) $306,000, (d) $378,000, (e) $273,600, (f) $345,600, (g) $279,000, (h) $351,000, (i) $304,200, (j) $282,600, (n) $374,400, (o) $360,000, (p) $34,800, (r) $750 (awarded contract on 160,000 sq. yds. of 3½-in. wood block and brick on concrete, with grout filler and asphalt expansion joints; Frank D. Proudfoot, Chicago, Ill., (m) $230,400, (n) $453,600, (o) $417,150, (p) $34,800, (r) $750. Noted Nov. 23 and Oct. 19.

Hamilton, Ala.—Bids will be received by the Board of Commissioners of Marion County until Dec. 21, for grading, draining and surfacing with gravel 2½ miles of state-aid road, and for continuing road eleven miles further. W. S. Keller, Montgomery, Ala., is State Highway Engr. Noted Nov. 2.

✚**New Decatur, Ala.**—A contract has been awarded to the W. M. LEFTWICH CO., Nashville, Tenn., at $5,200, for constructing sidewalks in East and Central New Decatur.

The City Council has authorized a bond issue of $14,700 for improving Sherman St.

New Orleans, La.—The lowest bid received for paving Sycamore St., from Lowerline to Leonidas St., was submitted by Egan & Co., at $2.37 per sq. yd. for granitoid.

✚**Memphis, Tenn.**—The contract for paving with wood block a portion of Calhoun Ave. has been awarded to M. LARKIN, 658 Vance St., at $10,750. List of bidders noted Nov. 23.

Louisville, Ky.—Bids have been received by the Board of Public Works for paving with bituminous macadam Clay St. from Jefferson to Broadway, as follows: Southern Asphaltoline Road Co., 70 cts. per sq. yd. for bituminous macadam and 70 cts. for asphaltic concrete; L. R. Figg Co., 85 cts. for tarvia; Barber Asphalt Paving Co., $1.35 for asphaltic construction, grade No. 1, and $1.25 on grade No. 2; Henry Bickel Co., $1.28 for Bermuda road asphalt, $1.18 on a No. 2 grade of the same material, and 95 cts. on tarvia; S. S. Gosnell & Co., 80 cts. for tarvia; F. G. Breslin, 89 cts. for taroil; Alex. Staebler, 65 cts. for tarvia.

Akron, Ohio.—The City Council will proceed to have East Market St. paved from High St. to Case Ave. The street is to be widened from 36 to 45 ft. Estimated cost, $150,000.

Akron, Ohio.—Bids for paving a portion of Annondale Ave. have been received as follows: Walter & Russell, $13,836; John Crisp & Sons, 951 Johnson St., $16,111; J. H. Machner, $14,247.

Cincinnati, Ohio.—Bids will be received by the Board of Commissioners of Hamilton County until noon, Dec. 22, for improving Forest Ave., from Springfield Pike west 2,750 ft. Fred Dreihs is Clk. of Bd.

Hamilton, Ohio.—Plans have been prepared by F. E. Weaver, Engr., for paving Sycamore and Walnut Sts., between Front and East Aves. Estimated cost, $32,225 and $33,359, respectively.

✚**Youngstown, Ohio.**—Contracts for paving have been awarded by the Board of Control, as follows: Hayes Ave., to M. FLEMING, 638 Himrod St., at $7,027; Warren Ave., to CHAS. HARRIS, 1665 Poland Ave., at $8,269. Noted Nov. 2.

Indiana Road Improvements.

Indiana.—Bids will be received for road improvements, as follows:

Dec. 9:

Brazil.—Until 11.30 a. m., by Commissioners of Clay County, for the construction of gravel roads in Perry and Lewis Townships. E. A. Staggs is County Audr.

Dec. 14:

Corydon.—Until 10 a. m., by Commissioners of Harrison County, for the construction of gravel roads or macadam roads in Boone and Webster Township. Wm. Taylor is County Audr.

Dec. 18:

Huntington.—Until 10 a. m., by Commissioners of Huntington County, for the construction of a gravel road in Huntington Township. John W. Weaver is County Audr.

East Moline, Ill.—Henry C. Paddock, City Engr., has estimated the cost of constructing 30,466 ft. of sidewalk at $17,138.

✚**Rock Island, Ill.**—The contract for paving 38th St. with brick has been awarded to the TRI CITY CONSTRUCTION CO., at $1.74 per sq. yd. Estimated cost, $51,000. Noted Nov. 9.

✚**Madison, Wis.**—The contract for paving Langton and Carroll Sts. has been awarded to the ANDREWS ASPHALT PAVING CO., at $31,232.

Kansas City, Kan.—Press reports state that bids will be received until Dec. 18 by the Board of County Commissioners for furnishing material and laying a macadam pavement on the Leavenworth Road, a distance of about 1½ miles. Frank M. Holcomb is County Clk.

✚**Hutchinson, Kan.**—The contract for 6,200 sq. yd. of block paving on Main St. has been awarded to DAVIS & EVERETT, at $6,324.

✚**Globe, Ariz.**—A contract has been awarded to J. W. JONES for the construction of seven miles of highway to be constructed over Ox Bow Hill between this city and Payson.

Olympia, Wash.—Bids will be received by the city until 5 p. m., Dec. 16, for constructing concrete walks on Chestnut St., between Fourth and Fifth Sts.

Walla Walla, Wash.—The Supervisors of Walla Walla and Umatilla Counties are considering the construction of a 12-mile macadam highway to connect Milton, Freewater and Walla Walla.

Burlingame, Cal.—Bids will be received by the Board of Trustees until 8 p. m., Dec. 18, for paving any constructing sewers in various streets. J. R. Murphy is Clk.

Pacific Grove, Cal.—Bids will be received by F. S. Johnston, Clk. Bd. of Trustees, until 7:30 p. m., Dec. 11, for furnishing labor and material for grading and surfacing the roadway of Light House Ave., from 14th St. to Fountain Ave.

Port Richmond, Cal.—Bids for improving Standard Ave., from Clarence St. to the Standard Oil property, have been received by the City Council, as follows: Galbraith Bros., $13,941; L. L. Page, $12,725.

✚**Santa Barbara, Cal.**—The contract for improving Rincon Road has been awarded by the Board of Supervisors to JOHN WILLIAMSON, Santa Barbara, at $36,000.

Venice, Cal.—Bids will be received until 5 p. m., Dec. 11, for the improvement of Center St. The proposed work consists of 35,300 sq. ft. of macadam paving; 1,900 cu. yds. of fill; 2,120 lin. ft. curb; 12,000 sq. ft. sidewalk; 1,600 ft. 8-in. vitrified pipe sewer, and 880 ft. 4-in. vitrified pipe sewer and one culvert. C. S. Thatcher is Clk.

MANUFACTURING PLANTS.

(✚*Denotes a contract awarded.*)

Lewiston, Me.—The Bates Street Shirt Co. is having plans drawn for the construction of a factory, to be of brick, 60x200 ft., five stories in height and contain about 60,000 sq. ft. of floor space.

East Douglas, Mass.—The Tally-Ho Knitting Co. are to build a factory on land owned by Thomas P. Ritchie, near Depot St.

Fitchburg, Mass.—A building is in contemplation by the Jewett Piano Case Co., to be used by it as a factory.

✚**Hardford, Conn.**—Contracts for the erection of a creamery building at Homestead Ave. and Woodland St., for Bryant & Chapman, have been awarded as follows: General contract, J. M. WOOLEY; carpenter work, THOMAS BARRETT; steel work, EASTERN BRIDGE & STRUCTURAL CO., Worcester, Mass. It will be a brick building, one story high, 64x125 ft. L. D. Bayley is the Arch.

✚**New Haven, Conn.**—The FRED T. LEY CO., INC., of Springfield, Mass., and Waterbury, Conn., have been awarded the contract to build the machine shop, 250x76 ft., of brick, one and two stories high, and a storehouse and office building, two stories high, of brick with concrete foundations and a wooden truss roof, 46x151 ft., on the Cedar Hill meadows, adjoining the new roundhouse, for the New York, New Haven & Hartford R. R. Co. The cost is estimated at $50,000.

Monteville, Conn.—It is stated that the Thames River Specialty Co. contemplate the erection of a cotton mill to cost $500,000.

Uncasville, Conn.—It is stated that the Uncasville Manufacturing Co. will soon start work on a large addition to its plant. The new structure will be built of brick and will greatly enlarge the beaming room of the plant.

✚**Waterbury, Conn.**—The AMERICAN BRIDGE CO. of New York have been awarded the contract for the steel work for a factory building on Thomaston Ave. for the Chase Rolling Mill Co. It will be 120x300 ft., one story high, with steel frame and truss work. The owners will do the mason and carpenter work.

Buffalo, N. Y.—The Strong Steel Foundry Co. will build a 2-story brick pattern shop at its new foundry plant at Hotel Ave. and the Erie R. R.

The Buffalo Incubator Co. has completed plans for a 1-story addition to its factory at 915 Bradley St.

Syracuse, N. Y.—The New Process Rawhide Co. has had plans prepared by Merrick & Randall, Archs., for a 1-story and basement addition to its factory on Plum St.

Medina, N. Y.—Plans have been prepared for the rebuilding of the A. L. Swett Iron Works Co., Gleenwood Ave., Medina, N. Y., which was recently destroyed by fire. The estimated cost was about $30,000.

Newark, N. J.—Kraeuter & Co., Newark, N. J., have had plans prepared for a 4-story reinforced concrete addition, to be erected at 16th St. and 18th Ave. The estimated cost of the structure is $40,000.

New Brunswick, N. J.—It is reported that the Joseph Hensler Brewing Co. of Newark, which recently bought the bottling establishment of Mrs. B. Zimmerman, will erect a $35,000 bottling plant. The structure will be fireproof and modern.

Paterson, N. J.—The Highland Silk Co., of Paterson, N. J., has selected a site and will construct a plant.

Wilkes-Barre, Pa.—Charles H. Caspar is planning a 5-story brick steel and concrete stock house to be built in Wilkes-Barre for the Schlegelmaier Brewing Co. Cost, about $250,000.

Williamsport, Pa.—The Flock Brewing Co. will install a new refrigerator plant.

Baltimore, Md.—Plans for the erection of a clothing factory in Northeast Baltimore for L. Greif & Bro. have been finished by Frank & Kavanaugh, Archs. The building will be located between Ashland and Montford Aves. It will be three stories high, of brick, with stone trimmings, slag roof and concrete foundations. It is said that for construction alone it will cost about $200,000.

Baltimore, Md. — The Consolidated Cotton Duck Co. will construct a new mill here, it is reported.

Baltimore, Md.—The Terminal Freezing & Heating Co. will enlarge plant of Baltimore Refrigerating & Heating Co., and will erect additional warehouse on Conway St. The estimated cost is $50,000.

Frederick, Md.—The Ideal Garage Co., Frederick, Md., has been incorporated with $30,000 capital stock to take over the business of the Frederick City Garage Co. The company will construct a building.

Berkley, Va.—John Cuthrell will build 20-ton ice plant, one story, brick construction, slag roofing; will cost $50,000.

✚**Richmond, Va.**—The Virginia-Carolina Chemical Co. awarded a contract to the HUGGER BROS., Montgomery, Ala., for the construction of a plant in the Ross Lake sub-division. The cost will be about $80,000.

Tifton, Ga.—The Stuart Lumber Co. will construct a $45,000 sawmill plant at Alapaha. A dam will be built to furnish water through the summer. The company will use all the product from the timber, putting in a plant for the manufacture of boxes, crates, etc.

Rome, Ga.—The Alabama Chemical Products Co., Lewis R. Smith, Gen. Mgr., plans erecting an aluminum oxide and phosphoric acid plant.

Bay Minnette, Ala.—A canning factory will be constructed here, it is reported.

Covey, Ala.—The Barrett Manufacturing Co., New York, is contemplating the construction of a plant at Covey. The cost is about $150,000.

Holly Ridge, La.—E. B. Norman & Co., Louisville, have announced plans for the development of a 28,000-acre timber tract and will construct a double-band mill with a capacity of 70 000 ft. Most of the equipment has been contracted for.

Chattanooga, Tenn. — A fertilizer plant for the grinding of limestone to be used by farmers on the soil, has been secured and will be located at some point along the Queen & Crescent R. R.

Cadiz, Ky.—The Alexander Bros., Cadiz, Ky., will construct a lighting plant in connection with the proposed ice factory.

Louisa, Ky.—It is reported that an ice factory will be constructed in connection with the plant of the Sandy Milk Co.

Akron, Ohio.—The Cuyahoga Realty Co., Akron, will construct a large garage and store room at 41-45 North High St.

✚**Cleveland, Ohio.** — The Standard Welding Co. has awarded contracts to HENRY G. SLATMEYER for a warehouse to be erected at the corner of West 76th St. and the Lake Shore & Michigan Southern R. R. It is to be a 1-story steel and frame building, 19x30 ft., and cement floor.

Delphos, Ohio.—The Delphos Gas Co. has been incorporated with a capital of $40,000 to build a plant for the manufacture of gas of all kinds. The incorporators are S. F. Shenk, John Mueller, Alex. Shenk and Theo. Kemker.

Massillon, Ohio. — The Massillon Bridge Structural Co. will erect a plant on their old site in the northwestern part of the city. The company will erect a plant 400x156 ft. and will employ about 225 men.

Peoria, Ill.—The boiler shop at the plant of the Avery Co., Peoria, was recently destroyed by fire. The estimated loss was about $150,000. The building will be rebuilt at once.

Streator, Ill.—The Crawford Locomotive & Car Works, Streator, Ill., has under contemplation the improvement and enlargement of its present plant.

St. Joseph, Mo.—Joseph Howe Bros., Boston, will construct a tannery here. A 10-acre site has been secured.

Fort Smith, Ark.—The Southwestern General Gas Co. will construct a by-product gas plant.

El Paso, Tex.—The Southwestern Marble Co., which has quarries 32 miles west of this city, has incorporated for $1,000,000. It is the intention of this company to erect a $200,000 plant four miles west of El Paso.

Fort Worth, Tex.—The Gulf Refining Co., Frick Annex, Pittsburgh, Pa., will soon commence construction of a new plant at Fort Worth. The cost is about $1,000,000.

Houston, Tex.—The Waco Sash & Door Co. will construct a factory that will cost approximately $500,000.

Oklahoma City, Okla.—P. E. Noll, Shawness, will construct a factory in Oklahoma City.

Roswell, New Mex.—Wallace Boone, of Carlsbad, New Mexico, will install a factory here for the manufacture of bridles, bits and spurs.

Roswell, New Mex.—The Oriental Cement Plaster Co. has been formed here with a capital of $500,000 for the purpose of manufacturing plaster cement on a large scale. The incorporators are Edwin A. McGillivary and Albert A. Caldwell, of Los Angeles, Cal.; Edwin M. Smyley and Elmer S. Wallace, of Santa Anna, Cal., and Lucius K. McCaffey, of Roswell.

Prescott, Ariz.—The United Verde Copper Co. has purchased a tract of land in the Verde Valley on which will be erected a new smelter.

Safford, Ariz.—The Gila Valley Milling Co. will erect a large flour mill near here. Leo Goldschmidt, of Tucson, is at the head of the company.

Los Angeles, Cal.—The Curtiss-Shea-Cox Co., Inc., will soon start construction work on a plant to be used for the manufacture of automobiles. A site has not yet been selected. The cost will be about $100,000.

San Diego, Cal.—The Pacific Sewer Pipe Co. proposes to start a factory here for the manufacture of vitrified pipe for the local market. There will be about 75 men employed.

San Diego, Cal.—The plant of the Omaha Tank Manufacturing Co. will be moved here at once. Three buildings, each 66x150 ft., will be erected on a site between 26th and 22d Sts. The manufacture of wooden and steel tanks for all classes of service will be carried on.

Pasadena, Cal.—The Reliance Gas Regulator & Machine Co. has been incorporated here for the amount of $100,000. The company has just completed the construction of a large machine and manufacturing plant. The directors are A. J. Hodge E. K. Lenzarder, G. S. Flintoft, M. B. Lenzarder, and E. E. Flintoft.

Ottawa, Ont.—The Beaver Co. of Buffalo, N. Y., manufacturers of prepared pulp building board, will erect its Canadian branch plant here. Plans are completed for two buildings, each 70x450 ft., 1-story, a power house and office building.

Welland, Ont.—The Pittsburgh Nut, Bolt & Nail Co. has purchased a site at Industrial Park and will build its Canadian branch plant here next spring.

MISCELLANEOUS CONTRACTS.

(**Denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

Rock Excavation — Boston, Mass. — Bids were received as follows Nov. 20 for rock excavation, Weymouth, Fore River, Mass.: Eastern Dredging Co., Boston, $8.70 per cu. yd.; Great Lakes Dredge & Dock Co., Chicago, Ill., $10.25; G. H. Breymann & Bros., Toledo, Ohio, $11.75; Daly & Hannan Dredging Co., Ogdensburg, N. Y., $10.95; Hiram W. Phillips, Quincy, Mass., $14.85; Johnston & Virden, Lewes, Del., $9.50.

***Hydraulic Fill.**—Stamford, Conn.—Bids for making a hydraulic fill on the propery of The Southfield Point Co., on the west shore of Stamford Harbor, will be received at the office of Francis L. Field, Atty. for the company, 165 Broadway, New York, until noon, Dec. 16. Information furnished on application to the company's attorney.

Barge Canal.—Albany, N. Y.—C. E. Treman, Supt. Pub. Wks., received bids Dec. 5, for Barge Canal Contract No. 10-A, providing for the completion of the canal at Fulton and raising the upper dam on the Oswego River and the construction of a dyke, as follows: Frank L. Cohen, Buffalo, N. Y., $107,-755; Henry P. Burgard, Buffalo, N. Y., $138,790; Lathrop, Shea & Henwood Co., Buffalo, N. Y., $183,499; T. A. Gillespie Co., 50 Church St., New York, $106,738; Engineer's Estimate, $103,058. The original contract was held by the McDermott Contracting Co.

***Subway.**—New York, N. Y.—Bids were received Dec. 5 by the Public Service Commission for Section 9, Route 5, Lexington Ave. Subway of the Tri-Borough Subway System. The lowest bidder was Patrick McGovern, Boston, Mass., at $1,961,000. This total is unofficial. There were ten other bidders.

✚**Repairs to Ferryboats**—New York, N. Y.—The contract has been awarded to JAMES SHEWAN & SONS, foot of

Houston St., New York, by Calvin Tomkins, Commissioner of Docks, for repairs to the ferryboats "Bronx" and "Manhattan," at $13,600. Bids were opened Nov. 29.

✚Piers—New York, N. Y.—The contract for constructing concrete piers E and F at the New York Navy Yard has been awarded by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., to the NEW YORK STATE CONSTRUCTION CO., 78 Broad St., New York, at $99,434. List of bidders noted Oct. 19.

Air Compressor, Etc.—New York, N. Y.—Bids will be received until 2 p. m., Dec. 14, by Arthur J. O'Keefe, Comr. of Bridges, for furnishing and erecting one duplex, 2-stage, motor-driven air compressor at the Williamsburg Bridge, Boro. Brooklyn, and for a timber approach to wharf at the University Heights Bridge over the Harlem River.

✚Bulkhead.—Red Bank, N. J.—About 400 ft. of bulkhead will be erected in front of the Beadleston property on the Rumson bluff overlooking the Shrewsbury River. GEORGE WOOLLEY, of Long Branch, N. J., has been awarded the contract.

✚Bulkheads.—Philadelphia, Pa.—The city has awarded the contract to ARMSTRONG & LATTA, Delaware and Christian Sts., Philadelphia, for constructing bulkheads at $172,245. Other bidders were: W. S. P. Shields, $196,877; Filbert Paving & Construction Co., $207,648; McHarg-Barton Co., New York, $234,895; John McMenamy, $257,221; Butler Bros. Construction Co., New York, $297,411; George L. Watson, $298,156; McLean Construction Co., Baltimore, Md., $333,718; American Paving & Construction Co., $526,595.

Cells.—Pittsburgh, Pa.—Bids are being received by A. H. Leslie, Supt. Allegheny County Workhouse, Pittsburgh, for replacing 500 brick cells with concrete cells, and for 20 additional cells.

Lead.—Washington, D. C.—Bids were received by the Commissioners of the District of Columbia on Nov. 27 for furnishing about 250,000 lbs. of pig lead, as follows: Nathan Trotter Co., Philadelphia, Pa., $4.44½ per 100 lbs.; Illinois Smelting & Refining Co., Chicago, Ill., $11,875; L. Vogelstein & Co., New York, $11,500; American Metal Co., Ltd., New York, $11,550; Louis Hoffenmeyer, Washington, $11,100; Nassau Smelting & Refining Co., New York, $4.52½ per 100 lbs.

Gun Carriages.—Washington, D. C.—Bids were received as follows Dec. 1 by the Chief of Ordnance, Washington, for gun carriages, etc., as follows: (a) 40 3-in. gun carriages; (b) 160 3-in. gun limbers; (c) 120 3-in. gun caissons; (4) 32 6-in. howitzer limbers; (e) 32 6-in. howitzer caissons; (f) 40 4.7-in. howitzer limbers; (g) 40 4.7-in. howitzer caissons: American & British Mfg. Co., Bridgeport, Conn., (a) $3,895.80 each, (b) $1,790.45, (c) $1,960, (f) $2,180.95, (g) $2,325.80; Bethlehem Steel Co., South Bethlehem, Pa., (a) $4,443.66, (b) $1.478.59, (c) $1,894.90, (d) $2,167.43, (e) $2,840.95, (f) $1,895.50, (g) $2,398.12; A. & J. M. Anderson, Boston, Mass., (b) $1,130, (c) $1,550, (d) $1,480, (e) $1,770, (f) $1,630, (g) $1,795.

✚Mail-handling Apparatus—Washington, D. C.—The contract for installing mechanical mail-handling apparatus in the new post office, Washington, has been awarded to the LAMSON CONSOLIDATED STORE SERVICE CO., 161 Devonshire St., Boston, Mass., at $42,750. Noted Oct. 19.

Cement, Etc.—Washington, D. C.—Bids will be received until Dec. 12 by the Bureau of Supplies and Accounts, Navy Dept., Washington, for furnishing at the navy yards and naval stations supplies as follows: Philadelphia, Pa., Schedule 4112, 2,000 bbls. of Portland cement; Schedule 4109, 40 M. ft. yellow pine. Brooklyn. N. Y., Schedule 4109, 50 M. ft. white pine, 20 M. ft. spruce. Washington D. C., Schedule 4109, 100 M. ft. white pine; Schedule 4112, miscellaneous steel plate. Norfolk, Va., Schedule 4109, 35 M. ft. yellow pine; Schedule 4110, 18,500 lbs. bar steel. Applications for proposals should designate the schedules desired by number.

✚Crypt.—Annapolis, Md.—Secretary of the Navy has awarded the contract to WARREN & WETMORE, Archs., 3 East 33d St., New York, for the construction of a crypt to contain the remains of Commodore John Paul Jones. in the new chapel at the Annapolis Naval Academy. Appropriation, $75,000.

•Bulkhead Wharf—Richmond, Va.—Bids were received as follows by the Committee on James River Improvement until 3 p. m., Nov. 29, for the construction of a timber and pile bulkhead wharf along the north shore of James River, in the city of Richmond, from Gillies Creek to Nicholson St., about 700 ft. long. Separate proposals will also be recived for the removal of earth, gravel, loose rock and solid rock between face of wharf and the channel: Thomas Sheehan, Roanoke, Va., $24,315; H. M. Allport & Son, Richmond, $23,999 (recommended for award); Alsop & Pierce, Newport News, Va., $23,300. No bids for dredging were received.

Drainage.—Summerville, S. C.—Plans have been completed by F. G. Eason, U. S. Drainage Engr., Charleston, S. C. for the drainage of 19,000 acres in the town of Summerville. The work will require a main canal, mostly dredge work, eleven miles long. Estimated cost, $19,000.

Repairs to Conveyors.—Key West, Fla.—Bids were received as follows, Dec. 2, for repairs to two conveyors of Coal Shed "A," at the Naval Station, Key West: Joseph C. Hoshor, 120 Liberty St., New York, $15,463; Brown Hoisting Machinery Co., Cleveland, Ohio, $18,000.

Drainage Canal.—Greenville, Miss.—B. B. Gordon, Consult. Engr., Greenville, has completed preliminary surveys for the construction of a drainage canal to cost about $40,000.

Levee Work.—Shreveport, La.—Bids will be received by the Board of Commissioners of the Caddo Levee District at Shreveport, until Dec. 15, for the construction of the folowing levee work: Cuba to Mulhaupt Levee, Sections Nos. 1 and 2, Caddo Parish, Red River, right bank, new levee; Section 1, Stations 0 to 82, length, about 8,200 ft., approximate contents, 65,000 cu. yds.; Section 2, Stations 82 to 173 + 58, length, about 9,158 ft.; approximate contents, 75,000 cu. yds.

✚Lock and Dam—Louisville, Ky.—The contract for constructing Lock and Dam No. 41, Ohio River, has been awarded to the OHIO RIVER CONTRACT CO., Evansville, Ind., at $1,036,473. List of bidders noted Oct. 19.

Fire Station.—Marion, Ohio.—Bids will be received by James A. Knapp, Dir. Pub. Safety, until noon, Dec. 14, for furnishing materials and labor necessary to complete the new central fire station. Plans, specifications and details are on file at the office of Gustave A. Niehus, Arch., Dayton, Ohio, and at the office of the Director of Public Safety. Charles M. Tobin is Clk. Dept. Pub. Safety.

Comfort Station.—Evansville, Ind.—The City Council has ordered plans prepared for the construction of an underground public comfort station on the south side of Fourth St.

✚Crushed Stone—Indianapolis, Ind.—The Board of County Commissioners has awarded the contract to A. B. MEYER & CO., 19 North Pennsylvania St., Indianapolis, for furnishing 45 carloads of crushed stone, at $1.29 per cu. yd. for 23 cars, and $1.09 for 22 cars.

Drain Tile—Farmersville, Ill.—Bids will be received until Dec. 8, by the Commissioners of Drainage District No. 3, at the office of Fred Kraus, Town Clk., Farmersville, for furnishing the material and constructing drainage work requiring the following vitrified salt glazed drain tile: 4,850 ft. of 8-in., average cut 5.1 ft.; 7,060 ft. of 10-in., average cut 5.1 ft.; 5,150 ft. of 12-in., average cut 5.3 ft.; 1,390 ft. of 14-in., average cut 5.3 ft.; 1,320 ft. of 16-in., average cut 5.1 ft.; 1,850 ft. of 18-in., average cut 6.4 ft.; 1,880 ft. of 22-in., average cut 7.3 ft.; 3,530 ft. of 24-in., average cut 5.9 ft., and 3,830 ft. of 27-in., average cut 5 ft., maximum depth. 7.5 ft. The soil is loose, black soil. Some willow grubbing will be required and no railroads are to be crossed. Estimated cost, about $16,000. J. W. Dappert, Taylorville, Ill., is Engr.

Channel.—Bedford, Iowa.—Bids will be received until 3 p. m., Dec. 20, by the Board of Taylor County Supervisors, Bedford, for the construction of a new channel for the West One Hundred and Two River in Drainage District No. 2. The entire length of the new channel is 27,260 ft. The width of the bottom from Station 0 to Station 272 + 60, is 12 ft. The average depth is 15.55 ft.; maximum depth, 23 ft.; side slopes one-half horizontal to 1 vertical; berms, 8 ft. The total amount of excavation is estimated at 305,000 cu. yds., mostly all earth, consisting of loam, silt and clay. Part of the right of way, which is 100 ft. wide, is covered by timber and must be cleared by the contractor. The ditch is divided into two sections: Section 1, from Sta-

LIST OF CONTRACTS PENDING

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
12-16	Magazine bldgs., Bremerton, Wash.	(S)11- 9
12-20	Distrib. system, Fort Logan, Colo.	(S.) 11-30
12-23	Concrete floor, etc., Fort. Lafayette, N. Y.	(S.) 11-30

Light, Heat and Power Plants.

Bids close.		Noted in issue of
At once,	Railway material, Omaha, Neb.	12- 7
At once	Piping, New Haven, Conn.	12- 7
At once,	Power plant, Virden, Man.	12- 7
12- 9	Light plant, Piedmont, Ala.	11-16
12-12	Fire alarm system, New York.	11-30
12-12	Equipment, Seattle, Wash.	12- 7
12-14	Steam boiler, New York	12- 7
12-15	Power building and equipment for electric-light system, Galva, Iowa	12- 7
12-16	Power house, Patton, Cal.	12- 7
12-16*	Materials, (See Proposals) Philadelphia, Pa.	11- 9
12-22	Wiring and fixtures, Leavenworth, Kan.	12- 7
12-27*	Heating and ventilating apparatus, San Diego, Cal.	11-30
1- 3	Wiring, Placerville, Cal.	11-30

Bridges.

Bids close.		Noted in issue of
12-12	Bridge, Baton Rouge, La.	12- 7
12-12	Bridges, Warrensburg, Mo.	12- 7
12-15	Bridge, repairs, Hokendauqua, Pa.	12- 7
12-15	Bridge Massillon, Ohio.	11-30
12-15	Bridge, Columbus, Ohio.	11-30
12-16	Bridges, Kalispell, Mont.	12- 7
12-18	Bridge, Waynesburg, Pa.	12- 7
12-18*	Bridge, Fulton, N. Y.	12- 7
12-18	Bridge, New Brunswick, N. J.	12- 7
12-18	Drawbridge, South River, N. J.	11-30
12-18	Bridge, Oswego, N. Y.	11-30
12-18*	Bridges, Fulton, N. Y.	11-23
12-18	Bridges, Houston, Tex.	12- 7
12-19	Bridge, Seattle, Wash.	12- 7
12-21	Bridge, Miamisburg, Ohio.	12- 7
12-28	Bridge, Winnipeg, Man.	12- 7
12-28*	Bridge, New Orleans, La.	11-16
1- 3	Bridge, Goldsboro, N. C.	11-30
1- 4	Bridge work, Preston, Iowa.	11-23
1-15	Viaduct, Atlanta, Ga.	11-23
1-15*	Bridges, Porto Rico (U. S. Poss.)	12- 7
2- 5	Bridge, Guadaloupe, Cal.	12- 7

Buildings.

Bids close.		Noted in issue of
12- 9*	Decorating court-house, Omaha, Neb.	11-23
12-11	Fire houses, New York, N. Y.	11-30
12-11	Armory, Woonsocket, R. I.	11-30
12-12	Court-house, Central City, Neb.	11-23
12-12*	Hospital equip., Pottsville,, Pa.	11-16
12-12	Jail, Bay Minette, Ala.	12- 7
12-14	U. S. marine hospital, Stapleton (S. I.), New York	11-16
12-14*	U. S. post-office, Homestead, Pa.	10-19
12-18	Building, Richmond, Va.	11-30
12-18	School, Cleveland, Ohio	12- 7
12-19	Hospital, Lima, Ohio	12- 7
12-19	Museum, Columbus, Ohio	11-30
12-20	U. S. post-office, Westfield, Mass.	11-16
12-22*	Plumbing, Fort Snelling, Minn.	11-30
12-27	U. S. post-office, Miami, Fla.	11-16
12-27*	U. S. post-office, San Diego, Cal.	11-23
12-28	U. S. custom house, remodel, Boston, Mass	11- 2
12-29-30	Buildings, Hawaii, (U. S. Poss.)	11-30
1- 1	Hospital, Salem, Ohio	12- 7
1- 1	Court house, Jonesboro, Tenn.	12- 7
1- 4	Hospital, Louisville, Ky.	11-23
1- 4	U. S, post-office Laporte, Ind.	11-30
1- 5	U. S. post-office, Maryville, Mo.	11-30
1- 6	U. S. post-office, Ellsworth, Me.	11-30
1- 9	Court house, Mattoon, Ill.	12- 7
1-10	U. S. post-office, Gaffney, S. C.	12- 7
1-12	U. S. post-office, Mansfield, Ohio	12- 7
1-13	U. S. post-office, Bismarck, N. Dak.	12- 7
3-20	U. S. post-office, Juneau, Alaska	12- 7
——	State Agricultural School, Curtis, Neb.	11-30
——	Business Block, Elwood, Ind.	11-23
——	Market, Muncie, Ind.	11-23
——	Car barns, Lagrange, Ind.	11-23
——	Remodeling armory, Buffalo, N. Y.	11-16
——	Y. M. C. A., Vincennes, Ind.	11-16
——	Church, Oak Forest, Ill.	11-16

Water-Works.

Bids close.		Noted in issue of
12- 8	Pump well, Burlington, Ont.	12- 7
12- 9	Water extensions, Piedmont, Ala.	11-16
12-10*	Dam, etc., Boise, Idaho	11-23
12-11*	Pump, Wilmington, Del.	11-23
12-11	Water mains, Falls City, Neb.	11-30
12-11	Water turbines, Wilmington, Del.	11-30
12-11	Pump, Hastings, Neb.	11-30
12-11	Water-wks., Exeter, Cal.	12- 7
12-12	Water pipe, Moose Jaw, Sask.	11-30
12-12	Water pipe, Portland, Ore.	11-30
12-12	Pump, Mason City, Iowa.	11-23
12-13	Pumping plant, Wapato, Wash.	11-30
12-14	Pump house, etc., Scottsdale, Aria.	——
12-14*	Pumping station, Clarksville, Tenn.	11-16
12-14	Watermains, etc, N. Y.	12- 7
12-14	Pump-house addition, Benson, Neb.	12- 7
12-15	Water supply, Victoria, B.C.	12- 7
12-15	Pump house, tower, etc., Neepawa, Man	11- 2
12-15	Water-works, Loreauville, La.	11-23
12-15	Water system, Las Cruces, N. Mex.	11-30
12-15	Water-works, Bennington, Okla.	11-30
12-15	Filters, Fort Mason, Cal.	11-30
12-20	District system, Fort Logan, Colo.	11-30
12-20*	Pipe valves, etc., Quebec, Que.	11-30
12-20	Pumps, Chicago, Ill.	11-23
12-20	Pumping station, Kingston, S. C.	12- 7
12-20	Water additions, Washington, Ga.	12- 7
12-27	Water extensions, Vancouver, B. C.	11-30
1- 8	Watermains, Euclid, Ohio	12- 7

Sewers.

Bids close.		Noted in issue of
12- 7	Sewer, Burlington, Iowa	12- 7
12-11*	Disposal plant, Norristown, Pa.	11-16
12-11*	Sewer, Johnstown, N. Y.	12- 7
12-12*	Sewer, New Bedford, Mass.	11-16
12-12	Sewers, Cincinnati, Ohio	12- 7
12-12	Sewers, Pittsburgh, Pa.	12- 7
12-14	Sewer, New York, N. Y.	12- 7
12-16*	Sewer system, Pleasant Ridge, Ohio	11-23
12-18	Sewer, Toppenish, Wash.	12- 7
12-19	Sewers, Edenton, N. C.	12- 7
12-20	Sewer pipe, Pryor Creek, Okla.	12- 7
12-20	Sewers, Baltimore, Md.	12- 7
12-29	Sewer system, Kingstree, S. C.	12- 7
1-15	Sewage disposal plant, Springfield, Mo.	12- 7
3- 1	Sewers, Mattoon, Ill.	12- 7

Streets and Roads.

Bids close.		Noted in issue of
12- 8	Paving, Cincinnati, Ohio	11-30
12- 9	Gravel roads, Brazil, Ind.	12- 7
12-11	Road, Morocco...(Foreign)	11- 2
12-11	Highway, New Orleans, La.	11-23
12-11	Paving, etc., Venice, Cal.	12- 7
12-11	Paving, Wise, Va.	12- 7
12-11	Graveling, Beachhaven, N.J.	12- 7
12-11	Paving, etc., Pacific Grove, Cal.	12- 7
12-12	Paving, etc., Pittsburgh, Pa.	12- 7
12-13	Paving, New York	12- 7
12-14	Gravel roads, Corydon, Ind.	12- 7
12-16	Walks, Olympia, Wash.	12- 7
12-18	Paving, Burlingame, Cal.	12- 7
12-18	Paving, Kansas City, Kan.	12- 7
12-18	Gravel roads, Huntingdon, Ind.	12- 7
12-19	Brick road, Belle Valley, O.	11-30
12-21	Paving, etc., Hamilton, Ala.	12- 7
12-22	Paving, etc., Cincinnati, O.	12- 7
12-27	Paving, Jacksonville, Fla.	12- 7
12-27	Paving, Lincoln, Neb.	11-30
1-15	Viaduct, Atlanta, Ga.	11-23
2- 1	Paving, Rochelle, Ill.	11-23

Miscellaneous.

Bids close.		Noted in issue of
12- 8	Trolley platform, New York.	11-30
12- 8	Drain tile, Farmersville, Ill.	12- 7
12-10	Steel rails, Siam..(Foreign)	11- 2
12-10*	Dam, etc., Boise, Idaho	11-16
12-11	Wharf, Goderich, Ont	11-30
12-11	Channel work, etc., Los Angeles, Cal.	12- 7
12-12	Cement, etc., Wash., D. C.	12- 7
12-12	Ditch, Willmar, Minn	12- 7
12-12	Extension to fire alarm system, New York, N. Y.	11-30
12-12	Wire, Australia..(Foreign)	11- 2
12-12*	Hospital equip., Pottsville, Pa.	11-23
12-13	Removing snow and ice, (Garbage), Boston, Mass	11- 9
12-14	Air compressor, New York.	12- 7
12-14	Fire station. Marion, Ohio.	12- 7
12-15	Levee work, Shreveport, La.	12- 7
12-15	Drainage, Clarence Creek, Ont.	12- 7
12-15*	Hopper suction dredge, British West Indies (Foreign)	11- 9
12-15*	Dredging, New York	11-23
12-15*	Lighthouse, Baltimore, Md.	11-23
12-15	Tug, barges, etc., Winnipeg, Man.	11-30
12-16	Magazine buildings, Bremerton, Wash.	11- 9
12-16*	Light station. Phila., Pa	11-16
12-16*	Fill, Stamford, Conn	12- 7
12-19	Immigration station, New Orleans, La.	11-23
12-19*	Dump cars, Winnipeg, Man.	11-30
12-19	Jetty, Ottawa, Ont	12- 7
12-19	Ditch, Logan, Iowa	12- 7
12-20	Channel, Bedford, Iowa	12- 7
12-20	Ditch, Newton, Iowa	11-30
12-20	Barge canal, Albany, N. Y.	11-30
12-21	Elevators, New York	11-30
12-23	Concrete floor, etc., Fort Lafayette, N. Y.	11-30
12-23*	Steel forgings, etc., Wheeling, W. Va.	11-30
12-27*	Dredges, San Francisco, Cal.	10- 5
12-30*	Gate machines and pumps, Panama......(U. S. Poss.)	11- 2
12-30*	Repairing jetty, Galveston, Tex.	12- 7
1- 2*	Dredging, Dallas, Tex	12- 7
1- 4	Battleships, Wash., D. C	11- 9
2- 1	Gunboats, Wash., D. C.	11-23
2- 6	(1912) Cranes, rails, Uruguay ......(Foreign)	11- 2
4-23*	(1912) Harbor work, Chile.	——
——*	Concrete, Montezuma, N. Y.	10-26
——	Excavation, Shelburne Falls, Mass.	9-23

Examinations.

Examination date		Noted in issue of
12-13	Expert Tracer and Bridge Draftsman, Washington, D. C.	11-23
12-13	Aid.—Washington, D. C.	11-30
12-23	Assistant mining engineer, Washington, D. C.	11-30

tion 0 to Station 261; excavation, 392,017 cu. yds.; Section 3, from Station 261 to Station 272 + 60, 12,983 cu. yds. Section 2 will not be dug under this contract if an outlet is provided running straight south to the state line between Missouri and Iowa. If no outlet is provided, then Section 2 will be constructed as above stated option to be let by Board of Supervisors as to which line shall be constructed, there being only 16 ft. in length difference. Bids will be received on each section separately. The starting point of Section 1 is the terminus of Drainage Ditch No. 1, Mason Township, Taylor County, Iowa. W. L. Holbrook is Engr. C. A. Hall is County Audr.

Waterfront Improvement.—Davenport, Iowa.—The City Levee Commission will improve the waterfront. Estimated cost, $75,000.

Drain.—Storm Lake, Iowa.—Bids will be received about Jan. 1 by the County Supervisors for constructing a drainage system in Buena Vista County. G. K. McCullough is County Engr., Storm Lake. Noted Nov. 23.

Drainage Ditch.—Logan, Iowa.—Bids will be received until Dec. 19 by the county for the Soldier River drainage work. The main ditch will require 665,000 cu. yds. of excavation; the Spooner Ditch, 103,000 yds.; East Soldier Ditch, 74,000 yds.; West Soldier Ditch, 34,000 yds.; Nelson Ditch, 14,000 yds.; Burcham Ditch, 44,000 yds.; Pratt Lake, 17,000 yds.

Ditch.—Olivia, Minn.—Bids were received Nov. 24, by J. L. Johnson, County Audr., Renville County, Olivia, for digging and constructing County Ditch No. 48. The approximate amount of work to be done follows: One cement retaining wall at outlet and furnishing and laying the following hard-burned clay tile of standard make: Lateral No. 1, 3,365 ft. of 6-in. tile laid average depth of 4.56 ft.; Main Ditch: Station 231 + 85 to 223 an open ditch 476 yds. excavation; Station 223 to 206, 20 in. second-grade sewer tile laid average depth of 7.1 ft.; Station 206 to 161, 20-in. hard-burned clay tile laid average depth of 11.6 ft.; Station 161 to 84, 18-in. tile laid average depth of 12 ft.; Station 84 to 60, 14-in. tile laid average depth of 7.7 ft.; Station 60 to 0, 12-in. tile laid average depth of 5.3 ft.; cubic yards to be removed, 18,099.07. The bids follow: Jensen & Christiansen, Hutchinson, $15,936; C. F. Clay, Rushville, Minn., $16,056; E. L. Dimick, Laurel, Neb., $17,220; Ichrever Drainage Co., $17,659; Andrew Hendrickson, $16,895; F. Desormoux Construction Co., $18,188.

Ditch.—Wilmar, Minn.—John Feig, County Audr., will receive bids until Dec. 12 for constructing Ditch No. 31. Estimated cost, open work, $49,272; work, including tile, $21,593; total, $70,865.

***Fish Hatchery.**—Pratt, Kan.—Bids were received as follows by The Regents of the University of Kansas at the office of the State Fish and Game Warden at Pratt, Nov. 21, for the construction of extensions and improvements to the state fish hatchery, which will include the following items: A low concrete dam 500 ft. in length; a concrete intake chamber, with appurtenances; a water supply conduit of 21-in. vitrified clay pipe, 6,875 ft. in length, with manholes and other appurtenances; approximately 125,000 cu. yds. of levee embankment; 860 ft. of 12-in., 4,200 ft. of 10-in., and 13,930 ft. of 8-in. vitrified clay pipe laid in trenches from 2 to 6 ft. in depth; 94 small concrete structures; 190 sluicegates 8-in. and five c.-i. flood gates; and 300 wire mesh screens: Payne & Barr, Danville, Ill., $20,002 for dam, levee embankment, intake and conduit; Robert T. Foster, Oklahoma City, Okla., $59,868 (entire work); A. R. Stimpson, Sabetha, Kan., and A. C. Libendorfer, Pawnee City, Neb., $21,572 for dam, levee embankment, intake and conduit; Pinaire & Martin, Wichita, Kan., $68,064 (entire work); Municipal Construction Co., Kansas City, Mo., $54,282; J. P., L. C. & C. P. Hunter, Oklahoma City, $70,071; Concrete Construction & Engineering Co., Iola, Kan., $58,517; J. L. Mullen, Lincoln, Neb., $57,091; Edward Jones, Topeka, Kan., and W. W. Jones, Leavenworth, Kan., $66,058; J. A. Green & Co., Chicago, Ill., $50,667; Katz Construction Co., Omaha, Neb., $54,139; Cook Construction Co., $18,806, for dam, levee embankment, intake and conduit; Fred Luttjohann and H. H. Folks, Topeka, Kan., $58,659 (entire work); Inter-Mountain Bridge & Construction Co., Tecumseh, Neb., $60,383; Kelley & Kelley, St. Joe, Mo., $56,915.

***Dredging.**—Dallas, Tex.—Bids will be received until noon, Jan. 2, by Capt. T. H. Jackson, Corps Engrs., U. S. A., Dallas, for dredging in Sections "A" and "C" of the Sabine-Neches, Canal, Tex. Noted Nov. 23 and Nov. 30 under Beaumont, Tex.

***Repairing Jetty.**—Galveston, Tex.—Bids will be received until noon, Dec. 30, by Maj. Earl I. Brown, Corps Engrs., U. S. A., Galveston, for repairing the northeast jetty at the mouth of the Brazos River

✚Reinforcing.—Galveston, Tex.—The A. M. BLODGETT CONSTRUCTION CO., Galveston, Tex., has been awarded an additional contract for reinforcing with concrete piles the 1,000 ft. of fill connecting the Galveston end of the causeway at $37,597.

Drainage.—Houston, Tex.—The County Commissioners have authorized the formation of Drainage District No. 5 in the southeastern part of the county. N. G. Kalb is Engr.

✚Drainage Canal.—Caruthersville, Mo.—The MICHIGAN CONSTRUCTION CO., Coin, Iowa, has been awarded the contract by the county for the construction of 103 miles of dredge ditches for the drainage of swamp lands, the work involving 2,583,673 cu. yds. of excavation. Bids were opened on Nov. 20 by B. M. Tinsley, County Clk., Caruthersville. B. O. Bennett, Caruthersville is Engr.

✚Tunnel—Glacier, Wash.—The Washington Anthracite Coal Co., Glacier, has awarded the contract for driving a 1,000-ft. tunnel on the Discovery claim at its camp to J. V. YELTON, Glacier.

Tunnel.—Ruston, Wash.—Plans for the tunnel at Ruston, the Tacoma smelter district, which the town is to construct as a part of the agreement with the Northern Pacific Ry. Co., have been completed and bids for the construction will be asked. The Ruston tunnel will be 5,000 ft. long and cost about $25 000.

Excavation Work.—Seattle, Wash.—Specifications have been completed by Maj. J. B. Cavanaugh, Corps Engrs., Seattle, for the excavation work for the Lake Washington Canal. Bids will be asked soon. Estimated cost, $900,000.

Dock—Seattle, Wash.—Bids for the construction of a municipal dock at the foot of Harrison St. have been opened by the Board of Public Works. J. A. McEachern & Co. submitted the lowest bid, at $13,661.

Dock.—Seattle, Wash.—The County Commissioners have voted to issue bonds for the construction of a dock at Harbor Island.

Dock.—Tacoma, Wash.—The construction of a large floating dock in Tacoma Harbor on the east side of the bay is being considered by Peter Westlin of the Westin Foundry & Machinery Co.

✚Steamer—Portland, Ore.—Herbert Holman has awarded a contract to HIGGINS & ROBERDING to construct a new steamer to take the place of the "America," plying between Portland and the Willamette Slough points in the passenger and freight trade. Plans have been drawn by W. H. Curtis.

Channel Work, Etc.—Los Angeles, Cal.—The Board of Supervisors will receive bids until 2 p. m., Dec. 11, for all labor and material necessary for straightening the channel of the Rio Honde and for clearing and excavating storm water channel, building levees, and for furnishing labor and material necessary for building pile wire dikes in San Antonio Protection District on San Gabriel River. H. J. Lelande is County Clk.

Pier.—St. Valier, Que.—Bids will be received until Dec. 12 by the Department Public Works, Ottawa, Ont., for constructing a landing pier at St. Valier. R. C. Desrochers is Secy.

Drainage.—Clarence Creek, Ont.—Bids will be received by O. Guibord, Reeve of Clarence Creek, until 1 p. m., Dec. 15, for the construction of the Cobb's Lake Drain in the Townships of Clarence, North and South Plantaganet including four reinforced-concrete bridge piers and one reinforced-concrete culvert. Plans and specifications may be examined and forms of tender procured at Clarence Creek, or at the office of Magwood & Walker, Civil Engrs., Cornwall, Ont. Total length of drain, 45,965 ft.; estimated excavation, earth, 178,613 cu. yds.; hard-pan, 350 cu. yds.; reinforced concrete, 186½ cu. yds.

Jetty.—Ottawa, Ont.—Bids will be received until Dec. 19 by the Department of Public Works, Ottawa, for the construction of 7,000 ft. of jetty at the mouth of the Fraser River.

CONTRACT PRICES.

Sidewalk Extension.—Salt Lake City, Utah.—Bids for the construction of a sidewalk extension were received by City Engr. G. F. McGonagle from the following: (A) J. W. Millen, (B) Zerbe, Walker & West, (C) Gilles Consstruction Co., (D) C. H. Ebred & Co., (E) Concrete Construction Co., (F) McKay & Reed.

SIDEWALK EXTENSION, SALT LAKE CITY, UTAH.

	A	B	C	D	E	F
21,008 cu. yds. excavation	$0.39	$0.40	$0.40	$0.42	$0.50	$0.52
237,680 sq. ft. cement paving, 4-in. thick	.09½	.10	.11	.10¼	.10	.10
7,075 sq. ft. cement paving, 6-in. thick	.14	.18	.15	.12	.12	.14
75 M ft. B.M. flumes	35.00	42.00	30.00	45.00	40.00	35.00
32 lin. ft. 4-in. vitrified pipe	.40	.20	.40	.35	.40	.25
395 lin. ft. fence removing	.05	.05	.05	.05	.10	.01
70 trees, 0 to 6-in. diam, removing	1.00	1.00	1.00	1.00	2.00	2.00
107 trees, 6-in. to 12-in. diam. removing	2.50	2.50	2.00	5.00	4.00	3.00
216 trees, 12-in. or over diam., removing	4.00	5.00	3.00	6.00	6.00	4.00
11 hydrants, removing	....	30.00	10.00	25.00	25.00	10.00
21,108 cu. yds. excavation	.39	.40	.40	.42	.50	.52
Total	$44,035.83	$46,850.59	$47,691.84	$48,786.56	$51,627.84	$52,429.46

✚Water System—Russellville, Ark.—Bids for constructing a water-works system in the city were received by the Russellville Water Co., Nov. 20, as follows: (A) TONKAWA CONSTRUCTION CO., Kansas City, Mo. (awarded contract); (B) J. A. Pringle, Montgomery, Mo.; (C) T. C. Brooks & Son, Jackson, Mich.; (D) W. F. Plummer Co., Springfield, Mo.; (E) Humphrey & Downer, Hugo, Colo.; (F) Cook Construction Co., Des Moines, Iowa:

WATER SYSTEM, RUSSELLVILLE, ARK.

	A.	B.	C.	D.	E.	F.
22,000 lin. ft. 10-in. wood stave pipe, 75-lb. w. p	$0.73	$0.75	$0.75	$0.77	$0.78	$0.78
1,100 lin. ft. 10-in. Class B c.-i. pipe	1.65	1.66	1.68	1.30	1.95	1.70
3,075 lin. ft. 88-in. Class B c.-i. pipe	.92	.92	.93	.95	.93	.97
9,925 lin. ft. 6-in. Class B c.-i. pipe	.67	.68	.68	.71	.70	.72
5,680 lin. ft. 4-in. Class B c.-i. pipe	.47	.47	.48	.51	.52	.51
42 fire hydrants, set	5.00	3.50	5.00	5.00	3.00	4.00
4 10-in. water gate valves and boxes, set	3.00	5.00	3.50	3.50	2.00	3.00
2 8-in. water gate valves and boxes, set	2.50	4.00	3.00	3.00	1.50	2.00
10 6-in. water gate valves and boxes, set	2.00	2.50	2.50	2.50	1.00	2.00
2 4-in. water gate valves and boxes, set	1.50	1.00	2.00	2.00	.50	2.00
1 10-in. swing check valve, set	2.50	5.00	3.50	3.50	2.00	3.00
6 ½-in. automatic air-relief valves	35.00	40.00	37.00	40.00	30.00	17.50
Pumping station, pumps, motors, transformers and coagulating system, installed, lump sum	7,943.00	8,150.00	8,440.00	8,150.00	7,537.60	8,300.00
Totals	$38,893	$39,818	$40,071	$40,117	$40,594	$40,703

***Fish Hatchery Improvements.**—Pratt, Kan.—Bids for improving the Kansas State Fish Hatchery were received Nov. 21, by The Regents of the University of Kansas at the office of L. L. Dyche, State Fish and Game Warden, as follows: (A) Payne & Barr, Danville, Ill.; (B) Robert T. Foster, Oklahoma City, Okla.; (C) A. R. Stinpson, Sabetha, Kan.; A. C. Libendofer, Pawnee City, Neb.; (D) Pinaire & Martlin, Wichita, Kan.; (E) Municipal Construction Co., Kansas City, Mo.; (F) J. P., L. C. & C. P. Hunter, Oklahoma City, Okla., (G) Concrete Construction & Engineering Co., Iola, Kan.; ,H) J. L. Mullen, Lincoln, Neb.; (I) Edward Jones, Topeka, Kan., and W. W. Jones, Leavenworth, Kan.; (J) J. A. Green & Co., Chicago, Ill.; (K) Katz Construction Co., Omaha, Neb.; (L) Cook Construction Co., Des Moines, Iowa; (M) Fred Luttjohann & H. H. Folks, Topeka, Kan.; (N) Inter-mountain Bridge & Construction Co., Tecumseh, Neb.; (O) Kelley & Kelley, St. Joe, Mo.; (P) estimate of W. C. Hoad, Engr.:

FISH HATCHERY IMPROVEMENTS, PRATT, KANSAS.

	A	B	C	D	E	F	G	H
1 dam, lump sum	$7,759.00	$7,707.00	$7,700.00	$8,502.00	$6,500.00	$7,400.00	$6,720.00	$6,882.00
1,050 cu. yds. river embankment	34.80	.45	.30	.20	.20	.18	.33	.20
1 intake, lump sum	1,389.00	1,000.00	1,150.00	1,481.00	870.00	822.00	910.00	608.00
1 conduit, lump sum	10,489.00	11,300.00	12,407.00	10,262.00	11,800.00	9,800.00	9,362.00	11,470.00
124,000 cu. yds. pond embankment	......	.18⅓	......	.18⅓	.16⅓	.19	.20	.17
41 A distributors, 3 gates	......	97.50	......	185.50	105.00	240.00	120.00	116.00
31 A distributors, 2 gates	......	77.50	......	157.50	85.00	200.00	94.00	96.00
5 B distributors	......	44.00	......	94.75	45.00	73.00	54.00	33.00
12 C distributors	......	60.00	......	197.80	45.00	105.00	52.50	55.00
860 lin ft. 12-in. drain	......	.62	......	.54	.53	.56	.52	.48
4,200 lin. ft. 10-in. drain	......	.51	......	.46	.42	.52	.40	.39
8,350 lin. ft. 8-in. drain	......	.41	......	.38	.33	.46	.33	.31
5,580 lin. ft. 8-in. supply pipe	......	.37	......	.38	.32	.48	.32	.31
5 drain outlets, each	......	24.00	......	54.28	26.00	.50.00	28.00	23.00
160 1-mesh screens, each	......	2.75	......	3.83	2.10	4.00	2.00	6.00
40 4-mesh screens, each	......	2.75	......	4.10	3.50	4.00	3.00	6.00
60 8-mesh screens, each	......	2.75	......	4.46	3.50	4.00	3.60	6.00
40 16-mesh screens, each	......	2.75	......	4.62	4.00	4.00	4.50	6.00
Totals.. Items 1-4	$20,002	$20,479	$21,572	$20,561	$18,380	$18,211	$17,338	$19,170
Items 5-18	......	39,388	......	47,502	35,901	51,860	41,178	37,921
Items 1-18	......	59,867	......	68,064	54,281	70,071	58,516	57,091

FISH HATCHERY IMPROVEMENTS, PRATT, KANSAS. (Continued.)

	I	J	K	L	M	N	O	P
1 dam, lump sum	$5,594.00	$5,659.00	$6,000.00	$7,453.00	$4,800.00	$7,600.00	$4,993.00	$8,477.50
1,050 cu. yds. river embankment	.21	.33	.16	.50	.25	.30	.24	.20
1 intake, lump sum	1,021.60	1,260.00	950.00	1,287.00	1,200.00	1,250.00	740.00	1,236.20
1 conduit, lump sum	11,893.00	10,096.00	10,500.00	9,541.00	11,850.00	10,150.00	11,769.75	11,335.20
124,000 cu. yds. pond embankment	.21	.13	.15⅔	......	.13	.17	.15	.19
41 A distributors, 3 gates	118.25	128.00	120.00	......	170.00	150.00	119.00	115.60
31 A distributors, 2 gates	96.00	98.50	95.00	......	130.00	130.00	99.50	89.60
5 B distributors	53.60	44.75	40.00	......	75.00	70.00	45.00	39.30
12 C distributors	110.00	53.95	50.00	......	90.00	90.00	40.00	45.75
860 lin ft. 12-in. drain	.70	.47	.55	......	.70	.57	.68	.70
4,200 lin. ft. 10-in. drain	.64	.88	.44	......	.66	.45	.55	.60
8,350 lin. ft. 8-in. drain	.55	.31	.35	......	.48	.36	.48	.43
5,580 lin. ft. 8-in. supply pipe	.55	.32	.35	......	.50	.33	.48	.40
5 drain outlets, each	35.00	22.40	45.00	......	250.00	30.00	23.00	22.00
160 1-mesh screens, each	2.50	5.00	2.25	......	3.50	3.00	6.50	2.60
40 4-mesh screens, each	2.50	5.00	3.75	......	3.50	3.25	6.50	2.60
60 8-mesh screens, each	2.50	5.00	3.25	......	3.50	3.50	6.50	2.60
40 16-mesh screens, each	2.50	5.00	5.00	......	3.50	4.50	5.00	2.60
Totals.. Items 1-4	$18,729	$17,361	$17,618	$18,806	$18,112	$19,315	$17,502	$20,259
Items 5-18	47,328	33,306	36,521	.....	40,547	41,067	39,412	41,627
Items 1-18	66,057	50,667	54,139	.....	58,659	60,382	56,915	61,886

Paving—Salt Lake City, Utah.—Bids for street improvements in Paving Extension No. 68, have been received by the Board of Public Works, as follows: (A) P. J. Moran; (B) Strange & Maguire:

PAVING, SALT LAKE CITY, UTAH.

	A.	B.
9,916 cu. yds. excavation	$0.80	$0.85
Concrete curbing, steel reinforced:		
284 lin. ft. 6 × 16-in	.90	.90
558 lin. ft., 6 × 16-in., curved	1.20	1.25
280 lin. ft., 6 × 6-in. including 30-in. gutter	1.50	1.48
Concrete curbing, plain:		
497 lin. ft. 6 × 16-in	.60	.63
292 lin. ft. 6 × 16-in., including 21-in. gutter	.95	.96
217 lin. ft. 6 × 16-in., including 21-in. gutter, curved	1.25	1.25
5,998 lin. ft. 6 × 16-in., including 30-in. gutter	1.15	1.18
140 lin. ft. 6 × 24-in	.75	.73
520 lin. ft. 6 × 24-in., including 30-in. gutter	1.23	1.35
90 lin. ft. false curb and 14-in. gutter	.95	1.05
50 lin. ft. false curb and 20-in gutter	1.10	1.25
90 lin. ft. curb, false curb and 14-in. gutter with c.-i. cover.	4.50	4.55
55 lin. ft. curb, false curb and 20-in. gutter with c.-i. cover.	4.50	4.75
460 lin. ft. curb, false curb and 14-in. gutter with reinforced-concrete cover	3.30	3.85
251 lin. ft. curb, false curb and 20-in. gutter with reinforced-concrete cover	3.35	3.85
1,684 lin. ft. 30 in. gutter	.70	.65
18,317 sq. yds. asphalt pavement, including foundation	2.50	2.48
1,633 sq. yds. 6-in. concrete pavement	2.10	2.10
4,526 sq. ft. 4-in. concrete walk	.16	.15
302 lin. ft. 10 × 16-in. waterway	2.55	2.50
259 lin. ft. 10 × 20-in. waterway	2.80	2.75
16 lin. ft. 8-in. vitrified pipe, furnished and laid	.45	.40
12 lin. ft. 6-in. vitrified pipe furnished and laid	.40	.35
36 lin. ft. 4-in. vitrified pipe furnished and laid	.32	.30
5 grating inlets, constructed	20.50	22.00
33 brick manhole covers, reset	5.00	5.00
32 M. ft. B. M. flume, furnished and set	45.00	45.00
93 lin. ft. flume, reset	.20	.50
1 tree removed, 6-in. or less in diameter	3.70	3.75
6 trees removed, from 6-in. to 1 ft. in diameter	5.25	5.50
66 trees removed, 1 ft. and over in diameter	7.50	7.50
Totals	$95,849	$97,000

U. S. POSSESSIONS AND CUBA.

***Highway Bridges.**—Porto Rico.—The Bureau of Public Works of the Department of the Interior of Porto Rico will receive at the office of T. Warren Allen, Supt. Pub. Wks., San Juan, P. R., bids and plans for furnishing on a dock at San Juan, one steel riveted pony truss highway bridge, 108-ft. 11½-in. span, for the Rio Grande near the town of Rio Grande, until 10 a. m., Jan. 15; also bids and plans for furnishing on a dock at San Juan, one steel-riveted, through-truss highway bridge span, 135 ft. ½-in. long between centers of pins for the Rio Espiritu Santo near the town of Rio Grande. Instructions to bidders, description of the work and specifications will be furnished to bidders on application to the Bureau of Public Works, San Juan, P. R., or to the Bureau of Insular Affairs, Washington, D. C.

EXAMINATIONS.

Expert Tracer and Bridge Draftsman.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 13-14, to secure eligibles from which to make certification to fill one or more vacancies in the position of Expert Tracer and Bridge Draftsman, Bridge Division, Office of Public Roads, Department of Agriculture, at entrance salaries of $1,200 to $1,500 a year, and vacancies requiring similar qualifications as they may occur, unless it is found to be in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion. The person or persons appointed to this position will be stationed at Washington, D. C., and the duties will consist in making a high grade of finished drawings on tracing cloth of highway bridges, including concrete or masonry abutments, for reproduction by photomechanical processes, and in checking up estimates on the same. The examination will consist of the subjects mentioned below, weighted as indicated: Methods of designing, 20 points; lettering, 30 points; drawing, 40 points; training and experience, 10 points. Applicants must have reached their 20th but not their 40th birthday. Examination form 1312.

Junior Engineer.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Dec. 13-14, to establish an eligible list from which selection may be made to fill vacancies arising in the grade of Junior Engineer in the Engineer-Department-at-Large. In this connection the War Department has stated that a competitor who attains an eligibility as result of this examination will be eligible for examination for appointment to the position of second lieutenant in the Corps of Engineers, U. S. A. Applicant must be between the ages of 21 and 29. Pure and applied mathematics, elementary problems in mensuration, solution of plane triangles, and theoretical and applied mechanics, involving a fair knowledge of pure mathematics to and including calculus, 20 points; use and construction of instruments and surveying (comprising transit, including stadia work, level, plane, table, rod, chain, tape, current meters, etc., surveying, leveling, and other field work required in civil engineering and not covered in subject 1), 30 points; design and construction (involving elementary knowledge of designing and constructing highways, railroads, dams, retaining walls, foundation work, trusses, etc.), 25 points; training, experience, and fitness, 25 points. No applicant who has not had at least five years' good experience in civil engineering work will be admitted to the examination. Graduation in civil engineering from any technical school of recognized standing will be considered equivalent to three and one-half years of this period. Students of civil engineering about to graduate or just graduated, and others who have filled minor positions such as chainmen, rodmen, levelmen, etc., and who have not received a suitable technical training, will not be admitted to this examination. Two days of six and three hours, respectively, will be allowed for this examination. All persons who have previously passed the civil engineer examination and who are within the age limits prescribed are eligible for admission to the War Department examination without further test by this Commission. For Junior mechanical or electrical engineer, the examination will consist of the subjects mentioned below, weighted as indicated: Pure and applied mathematics, 20 points; construction and operation of boilers, engines, electric machinery and apparatus, materials of construction, etc., 25 points;; theory and practice of mechanical and electrical engineering, 30 points; training, experience and fitness, 25 points. Applicants for this examination must have reached their 20th birthday. Examination form 1312.

TRADE PUBLICATIONS.

MERCURY-ARC RECTIFIERS.—General Electric Co., Schenectady, N. Y Bulletin No. 4871. Paper; 8 × 10½ ins.

A new bulletin has been issued describing this company's design of mercury arc rectifier for storage-battery charging. The bulletin describes in a general way rectifiers for moving picture machines, small storage cells and for the batteries of pleasure and commercial vehicles.

STORAGE-BATTERY CRANE TRUCK.—General Electric Co., Schenectady, N. Y. Bulletin 4892. Paper; 8 × 10½ ins.

A new piece of apparatus recently put on the market by this company is described here. It is a short, heavy storage-battery vehicle, with a swinging crane mounted on its forward end. The hook is raised by a one-ton hoist operated from the vehicle battery. This machine is intended to be used for loading and unloading trailers, cars, etc., and for stacking freight. Control of the vehicle and hoist is in the hands of a single operator.

ELECTRIC-RAILWAY EQUIPMENT.—General Electric Co., Schenectady, N. Y. Bulletins. Paper; 8 × 10½ ins.

Bulletin 4891 is an artistic publication consisting entirely of photographic reproductions of power station equipment and rolling stock manufactured by this company.

Bulletin 4867 describes and illustrates electric locomotives for switching and light freight service; the weight varies from 22 to 35 tons. In general, the equipment comprises four 50-HP. motors and multiple-unit control, so that two locomotives may be operated together.

Bulletin 4894 is devoted to the old familiar drum controllers for railway service, where all the motor contacts are made and broken under the motorman's handle.

PIPE FITTINGS.—McNab & Harlin Mfg. Co., 55 John St., New York City. Cloth; 5½ x 7¼ ins.; pp. 371; illustrated.

The 1911 catalog of this firm makes, in most convenient form, a valuable reference book on valves, pipe bends, pipe fittings, oil cups, water gages, and a great variety of similar goods in both cast-iron and brass. The last 16 pages are devoted to reference tables of gals. in round tanks per ft. of depth, dimensions of pipe and flanges, flow of water in pipe, weights of cast-iron pipes, 2-24-in. diameter inside, properties of saturated steam, tensile strength of bolts, areas and circumference of circles, safe load on wrought-iron pipe as columns, decimal equivalents, weights of metals, etc. The tables, as may be seen, are well selected and form a valuable appendix to the book.

ELECTRIC CIRCUIT BREAKERS.—General Electric Co., Schenectady, N. Y. Miscellaneous Bulletins. Paper; 8 × 10½ ins.

This company has recently issued Bulletins 4837 to 4833, inclusive, which form a series of pamphlets illustrating and describing in detail all of the circuit breakers manufactured by the company.

Bulletin 4857 gives geenral descriptions and applications, and notes descriptive of standard practice in the use of carbon contacts. No. 4838 is devoted to circuit breakers in large capacity for severe service, such as obtains in railway, power and lighting installations. No. 4837 describes apparatus of intermediate capacity for similar installations. No. 4840 shows apparatus especially adapted to motor-driven tools, etc. No. 4841 describes circuit breakers of small capacities. Bulletin 4842 discusses remote-control circuit breakers, and No. 4843 describes the magnetic blowout for railway and power service where the arc must be confined.

ELECTRIC-POWER APPARATUS.—General Electric Co., Schenectady, N. Y. Miscellaneous Bulletins. Paper; 8 × 10 ins.

In Bulletin 4886 the advantages of electric power in operating a mine or a group of mines are explained. Various apparatus, such as locomotives, hoists, pumps, skips, fans, compressors, crushers, breakers, tipples, cutters, etc., are described as they have been adapted to motor drive. Among the concerns whose equipment is pictured are the Philadelphia & Reading Coal & Iron Co., Lehigh Valley Coal Co., and the D., L. & W. R. R. Co.

Control apparatus for motors driving steel-mill machinery is described at length in Bulletin 4873. The various devices all show in their mechanical design, the severe operating conditions which are met with.

Motor drives for metal-working machinery are taken up in Bulletin 4815. A large variety of machinery is shown as built for direct motor driving.

In Bulletin 4869 are set forth the advantages of motor drives to the printing trades. The publication shows motors and controllers for direct and alternating-current circuits applicable to job and cylinder presses of all sizes and kinds and to stitching, perforating, cutting, numbering, folding and punching machines.

A variable-speed single-phase motor is described in Bulletin 4858. Another form of the same motor describer is designed for constant speed, but with characteristics of starting torque, overload capacity, efficiency, power factor, etc., nearer that of the polyphase induction type. Applications in various industrial plants are shown.

Situations Wanted

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CIVIL and mining engineer desires position with contracting company or with consulting engineers; graduate leading technical school; six years' experience building construction, power plant, underground mining, surveying, prospecting and reporting; best of references. Address "L. A. 23," Engineering News, New York. 23-1t

YOUNG civil engineer, experience reinforced concrete construction and structural steel work, desires position; best reference; moderate salary; location immaterial. Address "K. A. [illegible]" Engineering News, New York. 23-2t

Draftsmen

DRAFTSMAN with sick daughter seeks position in warm, dry climate; many years' experience; no reasonable offer refused. Address "T. 23," Engineering News, 1138 Monadnock Block, Chicago. 23-1t

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